OIL&GAS JOURNAL

A PennWell Publication

CONTENTS OF INDEX

Technical

Exploration 2
Drilling 4
Production 5
Gas Processing 7
Pipeline 9
Refining 10
Petrochemical 13

General

International 13
U.S. 20
Industry Affairs 22
Government 28
Organizations 28
Contributing Authors 29

Special Issues

Focus on Drilling ..... January 13
The Gulf of Mexico's Revival ..... January 20
Forecast and Review ..... January 27
Focus on Exploration ..... February 3
Worldwide Pipeline Construction Report ..... February 10
Capital Spending Outlook ..... February 17
Natural Gas in the Middle East ..... February 24
Practical Drilling Technology ..... March 3
Focus on Production ..... March 10
Refining Report ..... March 17
Focus on Pipelines ..... March 24
How Are Strategic Alliances Working? ..... March 31
Reserves Growth: Geology, Technology, Economics ..... April 7
Worldwide Construction Update ..... April 14
South America Report ..... April 21
Focus on Refining ..... April 28
Offshore Petroleum Operations ..... May 5
Africa Report ..... May 12
Petrochemical Report ..... May 19
Focus on Exploration ..... May 26
Worldwide Gas Processing Report ..... June 2
Energy Company Security ..... June 9
Focus on Pipelines ..... June 16
Petroleum Product Marketing ..... June 23
Focus on Drilling ..... June 30
Asia's Downstream Expansion ..... July 7
Gas and Power From Refining ..... July 14
Focus on Production ..... July 21
Midyear Forecast ..... July 28
Pipeline Economics ..... August 4
The Changing Energy Mix ..... August 11
Russia Report ..... August 18
Offshore Northern Europe Report ..... August 25
Focus on Refining ..... September 1
OGJ 200 ..... September 8
Focus on Pipelines ..... September 15
Drilling Report ..... September 22
Production Report ..... September 29
Worldwide Catalyst Report ..... October 6
Worldwide Construction Update ..... October 13
Focus on Exploration ..... October 20
Pipeline Report ..... October 27
Applied Geophysics Report ..... November 3
Managing Integrated Oil & Gas Companies ..... November 10
Managing Independent Oil & Gas Companies ..... November 17
Focus on Production ..... November 24
Focus on Drilling ..... December 1
Abandoning Offshore Platforms ..... December 8
Focus on Exploration ..... December 15
Worldwide Refining Report ..... December 22
Worldwide Production Report ..... December 29

Annual Index—1997

EXPLORATION

	Date	Page
COMPUTERS		
Raster logs may be basis for a geologic workstation—Scott L. Montgomery	4-7	84
3D, CAEX technologies improve Norphlet exploration/ development	11-10	31
Interactive 3D visualization speeds well, reservoir planning—Alan Petzet	11-24	82
COST		
FOCUS: EXPLORATION. What do recent N. Sea unit cost changes mean?—M. A. Adelman	2-3	45
GEOCHEMICAL EXPLORATION—2: Magnetic HGI, radiometric surveys prove cost-effective in W. Canada—Leonard A. LeSchack	5-26	82
EXPLORATION/DRILLING		
Vastar, British-Borneo slate deepwater Gulf of Mexico exploration	4-28	30
More innovations needed for world offshore environments	4-28	32
Exploration work accelerating in Peruvian jungle	7-7	31
Gulf of Mexico subsalt exploration frontier still on learning curve—Barbara Saunders	7-14	19
Subsalt exploration interest spreading outside Gulf of Mexico	7-14	22
Vicksburg, Frio successes lift Galveston Bay area prospects—G. Alan Petzet	8-11	75
Michigan to get horizontal and directional well projects—G. Alan Petzet	8-11	80
More data point to potential in S. Colorado sub-basin—John Morel and Tom Watkins	9-1	78
Deep production climbs in Wyoming's Waltman field	9-1	80
Anadarko, Mobil form deep Hugoton alliance	12-1	40
Drilling round starts in western Newfoundland	12-8	72
Independents eye Ukrainian E&D project	12-29	26
FORECASTS, TRENDS, STATISTICS, SURVEYS		
FOCUS: DRILLING. U.S. E&P surge hinges on technology, not oil price	1-13	42
THE GULF OF MEXICO'S REVIVAL. Technology gives gulf prospects world-class investment appeal—John H. Miers	1-20	50
Reserve growth important to U.S. gas supply—James W. Schmoker and Emil D. Attanasi	1-27	95
FOCUS: EXPLORATION. Trinidad and Tobago enjoying exploration boom	2-3	37
U.S. OCS leasing history to 12-31-96	2-3	65
API November 1996 U.S. well completions	2-10	66
API December 1996 U.S. well completions	2-17	66
U.S. RESERVES REPLACEMENT—1: Why aren't more U.S. companies replacing oil and gas reserves?—Jerry Paul Brashear, Alan B. Becker, Michael L. Godec, and Peter M. Crawford	3-3	85
U.S. RESERVES REPLACEMENT—2: How to overcome difficulties with reserves replacement—Jerry Paul Brashear, Alan B. Becker, Michael L. Godec, and Peter M. Crawford	3-10	75
U.S. RESERVES REPLACEMENT—3 (Conclusion): Here are analytical approaches for reserves replacement planning—Jerry Paul Brashear, Alan B. Becker, Michael L. Godec, and Peter M. Crawford	3-17	106
Premier takes a fresh look at old plays	3-24	34
API January U.S. well completions	3-24	73
U.S. CONVENTIONAL RESOURCES—1: U.S. resource estimates give insights to key oil, gas plays—John D. Grace	3-31	80
API February U.S. well completions	3-31	83
U.S. CONVENTIONAL RESOURCES—2: Resource assessment analysis identifies 21st century plays—John D. Grace	4-14	97
SOUTH AMERICA REPORT. Foreign petroleum companies developing new paradigm for operating in the rain forest region—Bob Williams	4-21	37
SOUTH AMERICA REPORT. Managing nontechnical risks associated with seismic operations in the tropical rain forests of Ecuador—Gary Barker, Gordon R. Smith, Francisco J. Vacas, Evan K. Swingholm, Richard M. Yuill, and Miguel A. Aleman	4-21	50
Exploration outlook gains strength in Poland	5-5	132
API March U.S. well completions	5-12	81
FOCUS: EXPLORATION. Government takes decline as nations diversify terms to attract investment—A. Pedro Van Meurs and Andrew Seck	5-26	35
FOCUS: EXPLORATION. North Slope satellite projects spark Alaska exploration	5-26	50
Ohio oil and gas activity, exploration on the upswing—Michael P. McCormac	6-9	67
API April U.S. well completions	6-9	72
API May U.S. well completions	7-7	81
Geology of Brunei deltas, exploration status updated—Jan Schreurs	8-4	76
Fiscal terms for gas need improvement in many countries—A. Pedro H. van Meurs and Andrew Seck	8-11	78
What's been drilled, found in world's deepwater area—Eloi Dolivo	8-25	104
MANAGEMENT PERSPECTIVE: Can the E&P industry avoid future shock?—David Murphy, Chris Friedemann, and Ricardo Castro	9-8	23
API June U.S. well completions	9-29	106
World resource statistics geared for electronic access—C. D. Masters, D. H. Root, and R. M. Turner	10-13	98
API July U.S. well completions	10-13	104
API August U.S. well completions	10-27	81
API September U.S. well completions	11-24	83
API October U.S. well completions	12-22	110
GEOLOGY		
NEW ZEALAND BASINS—1: Overview of New Zealand's petroleum systems, potential—Richard Cook and Roger Gregg	1-6	55
NEW ZEALAND BASINS—2: Southern, eastern New Zealand petroleum systems examined—Richard Cook and Roger Gregg	1-13	62
Guatemala accelerates efforts to attract foreign E&D capital	1-20	77
BOLIVIA EXPLORATION—1: World class Devonian potential seen in eastern Madre de Dios basin—Ken E. Peters, John B. Wagner, Daniel G. Carpenter, and Keith T. Conrad	2-17	61
BOLIVIA EXPLORATION—2: Eastern Madre de Dios Devonian generated large volumes of oil—Ken E. Peters, John B. Wagner, Daniel G. Carpenter, and Keith T. Conrad	2-24	61
East Texas Cotton Valley pinnacle reef E&D emerging as hot gas play—Richard Wheatley	3-3	23
Central Texas coast gas search bears fruit	3-3	89
3D seismic propels Cotton Valley reef play—Richard Wheatley	3-10	32
Infrastructure of Cotton Valley expanding with exploration and development action	3-10	34
Monument jeopardizes area of Utah's resources—G. Alan Petzet	3-24	69
Raster logs may be basis for a geologic workstation—Scott L. Montgomery	4-7	84
U.S. CONVENTIONAL RESOURCES—2: Resource assessment analysis identifies 21st century plays—John D. Grace	4-14	97
Nonproducing Paraguay to get rare wildcats—G. Alan Petzet	4-21	76
Australia's southeastern Bonaparte basin has plenty of potential—Shige Miyazaki	4-21	78
Arizona's Holbrook salt basin holds oil, gas opportunities—Edgar B. Heylmun	5-5	127
A geological assessment: What's ahead for Louisiana Austin chalk—William T. Maloy	6-2	149
Indus basin off Pakistan contains few wells—Viqar un Nisa Quadri and S. M. G. J. Quadri	6-16	68
Interest grows in Mississippi's Upper Jurassic Cotton Valley trend—Stephen D. Champlin	6-23	75
Switzerland exploration may resume—Patrick H. Lahusen	6-23	78
Innovations help exploit mature Trinidad land fields—Stanley R. Wharton and John Kenns-Dumas	6-30	77
Egypt eastern desert exploration turns up oil—G. Alan Petzet	6-30	83
Central-northern Appalachian coalbed methane flow grows—Paul C. Lyons	7-7	76
Potential outlined in Southern Outeniqua basin off S. Africa—Jacques Roux	7-21	87
New targets in the Bone Spring formation, Permian Basin—Bruce S. Hart	7-28	85
Geology of Brunei deltas, exploration status updated—Jan Schreurs	8-4	76
Vicksburg, Frio successes lift Galveston Bay area prospects—G. Alan Petzet	8-11	75
Arkansas turbidite studies may aid Oklahoma Jackfork exploration—Roger M. Slatt, Hisham Al-Siyabi, Eugene T. Williams, Charles G. Stone, Paul Weimer, Robert J. Davis, and Douglas W. Jordan	8-18	67
Mannville gas reentry lights western Canada—G. Alan Petzet	8-18	72
More data point to potential in S. Colorado sub-basin—John Morel and Tom Watkins	9-1	78
SOUTH AFRICA OFFSHORE E&P—1: Exploration to first production on Block 9 off South Africa—Paul L. A. Burden and Christopher P. N. Davies	9-8	92
SOUTH AFRICA OFFSHORE E&P—2: Oribi field is South Africa's first offshore crude oil production—Paul L. A. Burden and Christopher P. N. Davies	9-15	63
E. Texas Upper Jurassic reefs: An expanding Cotton Valley lime play—Scott L. Montgomery, Gus Wilson, Dan Ziegler, and Keith Hatch	9-22	82

	Date	Page
New exploration concepts spark Swiss gas, oil prospects—Roland Schegg, Werner Leu, and Emil Greber	9-29	102
The integrated radiation environment at well sites—an adjunct to petroleum exploration—Frederic R. Siegel, Reuven Chen, J. Eduardo Vaz, and V. K. Mathur	10-6	91
FOCUS: EXPLORATION. Myanmar's Indaw/Chindwin area has Tertiary, Cretaceous targets—Ed F. Durkee	10-20	76
Texaco explores near giant McKittrick field	10-20	85
Oil production dominates in Nebraska's Dundy County—Raymond R. Burchett	10-20	86
Cambridge arch exploration simmers	10-20	86
More operators set sights on western Newfoundland—Alphonsus Fagan	10-27	78
3D, CAEX technologies improve Norphlet exploration/development	11-10	31
New well may open production in Marfa basin, Tex.—Scott L. Montgomery	11-10	87
Pemex plans large program to expand Burgos basin gas output	11-10	89
A native corporation evaluates potential of Alaska's Kandik area—David M. Hite	11-17	89
New Cretaceous pay zones opened in southern Mississippi's Brookhaven field—G. Alan Petzet	11-17	93
Interactive 3D visualization speeds well, reservoir planning—Alan Petzet	11-24	82
Potential seen in areas off Northwest, Southeast Australia—Paul E. Williamson	11-24	84
Exploratory well to start in Lusitanian basin, Portugal—Thomas Uphoff, George Allen, Michael Stearns, and Patric Monteleone	12-8	67
FOCUS: EXPLORATION. Petroleum systems, resources of Southeast Asia, Australasia—Jim Howes	12-15	52
FOCUS: EXPLORATION. New Zealand's Canterbury basin prospects reviewed in a continental Gondwana setting—Tom Haskell and Ian Wylie	12-15	57

GEOPHYSICS

Guatemala accelerates efforts to attract foreign E&D capital	1-20	77
East Texas Cotton Valley pinnacle reef E&D emerging as hot gas play—Richard Wheatley	3-3	23
3D seismic propels Cotton Valley reef play—Richard Wheatley	3-10	32
Infrastructure of Cotton Valley expanding with exploration and development action	3-10	34
SOUTH AMERICA REPORT. Managing nontechnical risks associated with seismic operations in the tropical rain forests of Ecuador—Gary Barker, Gordon R. Smith, Francisco J. Vacas, Evan K. Swingholm, Richard M. Yuill, and Miguel A. Aleman	4-21	50
Costa Rican data synthesis indicates oil, gas potential—Jaime Barrientos, Giovanni Bottazzi, Alberto Fernández, and Guillermo Barboza	5-12	76
GEOCHEMICAL EXPLORATION—1: Results of magnetic GHI and radiometric surveys in W. Canada—Leonard A. LeSchack	5-19	84
GEOCHEMICAL EXPLORATION—2: Magnetic HGI, radiometric surveys prove cost-effective in W. Canada—Leonard A. LeSchack	5-26	82
Total group starts big 3D program in Thai gulf	7-21	94
APPLIED GEOPHYSICS REPORT. Small advances yield big improvements in seismic images from difficult areas—Tom Nickoloff and Jim Manatt	11-3	37
APPLIED GEOPHYSICS REPORT. Calibration method helps in seismic velocity interpretation—C. E. Guzman, H. A. Davenport, and R. Wilhelm	11-3	44
APPLIED GEOPHYSICS REPORT. AVO helps seismic imaging in deepwater environments—Chuck Skidmore, Richard O. Lindsay, and Davis Ratcliff	11-3	55
APPLIED GEOPHYSICS REPORT. Marine four-component acquisition boosts role of shear-wave data in seismic work—Karl A. Berteussen and R. James Brown	11-3	62
Hydrates represent gas source, drilling hazard—Elchin Bagirov and Ian Lerche	12-1	99
FOCUS: EXPLORATION. Petroleum systems, resources of Southeast Asia, Australasia—Jim Howes	12-15	52

MANAGEMENT

FOCUS: EXPLORATION. Rocky Mountain federal lands pose widespread access issues—Patrick Crow	2-3	42
U.S. CONVENTIONAL RESOURCES—3: Resource data provide insights into U.S. exploration risk—John D. Grace	4-28	84
FOCUS: EXPLORATION. Achieving profitable growth in E&P: New strategies, business model—Panos Cavoulacos and Etienne Deffarges	5-26	42
ENERGY COMPANY SECURITY. Oxy claims Guerrilla threats behind local tribe's opposition to its Colombian exploration project	6-9	36
MANAGING INTEGRATED OIL & GAS COMPANIES. A PRIMER ON EXPLORING ABROAD—PART I: Strategic choices crucial to foreign upstream ventures—Richard A. Wasteneys	11-10	49
MANAGING INDEPENDENT OIL & GAS COMPANIES. A PRIMER ON EXPLORING ABROAD—PART II: Preparation eases practical problems of first work abroad—Richard A. Wasteneys	11-17	60
Interactive 3D visualization speeds well, reservoir planning—Alan Petzet	11-24	82

METHODS AND TECHNIQUES

THE GULF OF MEXICO'S REVIVAL. Technology gives gulf prospects world-class investment appeal—John H. Miers	1-20	50
U.S. RESERVES REPLACEMENT—3 (Conclusion): Here are analytical approaches for reserves replacement planning—Jerry Paul Brashear, Alan B. Becker, Michael L. Godec, and Peter M. Crawford	3-17	106
HOW ARE STRATEGIC ALLIANCES WORKING? Strategic alliance, multidisciplinary teamwork enhanced field development in Cotton Valley trend—Holly G. Krus, Ken Haley, Larry Britt, Ronald H. Benson, Kevin W. England, Ron Holt, Nicholas C. Piskurich, and Robert A. Woodroof	3-31	43
U.S. CONVENTIONAL RESOURCES—3: Resource data provide insights into U.S. exploration risk—John D. Grace	4-28	84
FOCUS: EXPLORATION. Achieving profitable growth in E&P: New strategies, business model—Panos Cavoulacos and Etienne Deffarges	5-26	42
The integrated radiation environment at well sites—an adjunct to petroleum exploration—Frederic R. Siegel, Reuven Chen, J. Eduardo Vaz, and V. K. Mathur	10-6	91
FOCUS: EXPLORATION. An integrated oil industry runs in Chindwin basin, Myanmar—E. F. Durkee and M. J. Gerrard	10-20	63
APPLIED GEOPHYSICS REPORT. Small advances yield big improvements in seismic images from difficult areas—Tom Nickoloff and Jim Manatt	11-3	37
APPLIED GEOPHYSICS REPORT. Calibration method helps in seismic velocity interpretation—C. E. Guzman, H. A. Davenport, and R. Wilhelm	11-3	44
APPLIED GEOPHYSICS REPORT. Marine four-component acquisition boosts role of shear-wave data in seismic work—Karl A. Berteussen and R. James Brown	11-3	62
MANAGING INDEPENDENT OIL & GAS COMPANIES. A PRIMER ON EXPLORING ABROAD—PART II: Preparation eases practical problems of first work abroad—Richard A. Wasteneys	11-17	60
MANAGING INDEPENDENT OIL & GAS COMPANIES. Attention to state, local taxes can save producers money—Robert K. Eggett	11-17	68
Paleogeomorphic mapping applied in Stagecoach gas field, N.Y.—Arthur J. Pyron	12-22	106

OFFSHORE

THE GULF OF MEXICO'S REVIVAL. Deepwater, subsalt prospects open new era for Gulf of Mexico action—Richard Wheatley	1-20	37
Egypt offers six exploration blocks for bid	2-3	30
Hardman Resources obtains pact for exploration off Mauritania	2-3	64
U.S. OCS leasing history to 12-31-96	2-3	65
New Zealand E&D percolating	3-24	33
More innovations needed for world offshore environments	4-28	32
Pragmatism underscores offshore conference	4-28	34
Ireland awards Rockall Trough licenses	6-16	32
Perupetro scraps bids for blocks, slates new round	6-16	33
E&D to accelerate off Republic of Congo	6-23	25
Ultradeepwater exploration slated off Gabon	6-23	25
More deepwater exploration slated in gulf	7-7	30
Teamwork, technology boost reserves, output off Nigeria—Kirk H. Van Sickle, Elaine L. Cash, and Mike Hugentobler	7-14	69
Potential outlined in Southern Outeniqua basin off S. Africa—Jacques Roux	7-21	87
Brazil marks more offshore exploration and development progress	7-28	38
What's been drilled, found in world's deepwater area—Eloi Dolivo	8-25	104
Exploration plans flourish in Mozambique	9-8	34
SOUTH AFRICA OFFSHORE E&P—1: Exploration to first production on Block 9 off South Africa—Paul L. A. Burden and Christopher P. N. Davies	9-8	92
SOUTH AFRICA OFFSHORE E&P—2: Oribi field is South Africa's first offshore crude oil production—Paul L. A. Burden and Christopher P. N. Davies	9-15	63
Coastal lists Smackover, Sunniland objectives in gulf off Florida—G. Alan Petzet	9-29	101
Norway studies deepwater exploration/development options	11-3	26
Exploration sags off Viet Nam	11-3	32
APPLIED GEOPHYSICS REPORT. AVO helps seismic imaging in deepwater environments—Chuck Skidmore, Richard O. Lindsay, and Davis Ratcliff	11-3	55
APPLIED GEOPHYSICS REPORT. Marine four-component acquisition boosts role of shear-wave data in seismic work—Karl A. Berteussen and R. James Brown	11-3	62

	Date	Page
Operators mull new deepwater concepts	11-10	36
Geological perils of deep water—David Knott	11-17	30
BP group starts up Troika field in Gulf of Mexico	11-17	44
Potential seen in areas off Northwest, Southeast Australia—Paul E. Williamson	11-24	84
Santos adds gas discoveries in Australia	11-24	89
Wood Mackenzie: Angola the new hot spot	12-1	41
Large field increases Queensland gas supply	12-15	70
Shell sets up deepwater E&P division	12-29	24
Dagestan offers Caspian exploration blocks	12-29	29
RESERVES		
Montana reservoir management plan launched	1-6	58
THE GULF OF MEXICO'S REVIVAL. Deepwater, subsalt prospects open new era for Gulf of Mexico action—Richard Wheatley	1-20	37
Reserve growth important to U.S. gas supply—James W. Schmoker and Emil D. Attanasi	1-27	95
U.S. RESERVES REPLACEMENT—1. Why aren't more U.S. companies replacing oil and gas reserves?—Jerry Paul Brashear, Alan B. Becker, Michael L. Godec, and Peter M. Crawford	3-3	85
U.S. RESERVES REPLACEMENT—2: How to overcome difficulties with reserves replacement—Jerry Paul Brashear, Alan B. Becker, Michael L. Godec, and Peter M. Crawford	3-10	75
U.S. RESERVES REPLACEMENT—3 (Conclusion): Here are analytical approaches for reserves replacement planning—Jerry Paul Brashear, Alan B. Becker, Michael L. Godec, and Peter M. Crawford	3-17	106
U.S. CONVENTIONAL RESOURCES—1: U.S. resource estimates give insights to key oil, gas plays—John D. Grace	3-31	80
RESERVES GROWTH: GEOLOGY, TECHNOLOGY, AND ECONOMICS. Technology pushes reserves 'crunch' date back in time—N. J. Smith and G. H. Robinson	4-7	43
RESERVES GROWTH: GEOLOGY, TECHNOLOGY, AND ECONOMICS. Better understanding urged for rapidly depleting reserves—C. J. Campbell	4-7	51
U.S. CONVENTIONAL RESOURCES—2: Resource assessment analysis identifies 21st century plays—John D. Grace	4-14	97
Exploration mounts off Western Australia	6-30	37
Teamwork, technology boost reserves, output off Nigeria—Kirk H. Van Sickle, Elaine L. Cash, and Mike Hugentobler	7-14	69
Santos groups build Cooper/Eromanga gas reserves	9-1	81
World resource statistics geared for electronic access—C. D. Masters, D. H. Root, and R. M. Turner	10-13	98
Arizona's Holbrook CO_2 area may hold oil, gas reserves—G. Alan Petzet	10-20	84
Operators mull new deepwater concepts	11-10	36
MANAGING INDEPENDENT OIL & GAS COMPANIES. Long reserves lives sustain prospects for independents in the U.S. Lower 48—David B. Hatcher and Arlon R. Tussing	11-17	49
MANAGING INDEPENDENT OIL & GAS COMPANIES. Underestimation characterizes estimation of oil reserves	11-17	58
Where future Canadian gas supply will originate—Robert A. Meneley	12-15	67
Large field increases Queensland gas supply	12-15	70
Tuscaloosa marine shale may be untouched Gulf Coast oil play—Chacko J. John, Bobby L. Jones, Reed Bourgeois, Brian J. Harder, and James E. Moncrief	12-29	91

DRILLING

	Date	Page
ACTIVITY, Area		
Pluspetrol slates drilling program in Peru	6-30	37
BITS		
FOCUS: DRILLING. Ream-while-drilling tool cuts costs of three Venezuelan wells—Jorge Rodriquez Rothe, Leandro J. Carre C., Ricardo Portillo, and Marcos Leal	1-13	33
FOCUS: DRILLING. Reamer shoe helps casing reach total depth	1-13	40
PAO lubricant inhibits bit balling, speeds drilling—Graham Mensa-Wilmot, Robert L. Garrett, and Rebecca S. Stokes	4-21	68
Drill bit benchmarking improves drilling performance—L. A. (Harvey) Brown Jr., D. S. Stolz, and D. G. Nims	6-2	139
New PDC cutters improve drilling efficiency—Graham Mensa-Wilmot	10-27	64
CEMENTING (Also See Production)		
Mud management, special slurries improve deepwater cementing operations—James Griffith and Ronnie Faul	10-20	49
COALBED METHANE		
Powder River coalbed methane output growing fast—G. Alan Petzet	3-10	79
COMPLETIONS, General and Multiple (also see Production)		
3D seismic propels Cotton Valley reef play—Richard Wheatley	3-10	32
U.S. completions climb 5% two quarters in a row	12-15	29
Classification provides framework for ranking multilateral complexity and well type—Eric Diggins	12-29	73
COSTS		
FOCUS: DRILLING. Sizing up well costs in most drilled depth ranges	1-13	44
FOCUS: EXPLORATION. What do recent N. Sea unit cost changes mean?—M. A. Adelman	2-3	45
Underbalanced foam drilling reduces hole problems and costs—Robert R. Teichrob and James J. Manuel	8-18	52
DRILLING REPORT. Onshore rig surplus diminishes as demand rises—Eugene M. Isenberg	9-22	62
DIRECTIONAL, CROOKED-HOLE, WELL-BORE SURVEYS		
Natural parameter method accurately calculates well bore trajectory—Liu Xiushan, Shi Zaihong, and Fan Sen	1-27	90
DRILL PIPE		
Model predicts drill pipe fatigue in horizontal wells—Jiang Wu	2-3	47
Mechanical oscillator frees stuck pipe strings using resonance technology—Buck Bernat and Henry Bernat	11-3	68
FLUIDS (Mud, Air, Gas) PRACTICES, SYSTEMS		
Low permeability filter cake limits damage from high-pH drilling fluids—Zhijun Wu and Younguan Hu	2-17	56
PRACTICAL DRILLING TECHNOLOGY. Virtual rheology and hydraulics improve use of oil and synthetic-based muds—Mario Zamora	3-3	43
PRACTICAL DRILLING TECHNOLOGY. Integrating surface systems with downhole data improves underbalanced drilling—Larry Comeau	3-3	56
PRACTICAL DRILLING TECHNOLOGY. Closed surface system allows accurate monitoring of drilling returns—Geoff Whitehouse and Peter Stefureak	3-3	65
Method reduces errors in oil-based mud hydraulic calculations—Haiwang Sun	3-24	53
FOCUS: DRILLING. Horizontal air drilling increases gas recovery in depleted zone—Jeffrey P. Elrod	6-30	49
Hole-cleaning model evaluates fluid performance in extended-reach wells—Terry Hemphill	7-14	56
Underbalanced foam drilling reduces hole problems and costs—Robert R. Teichrob and James J. Manuel	8-18	52
Low-head drilling avoids differential sticking and reduces formation damage—Manfred Kass, Jens-Christian Senger, and Manfred Sach	9-8	71
Mud management, special slurries improve deepwater cementing operations—James Griffith and Ronnie Faul	10-20	49
FORECASTS, TRENDS, STATISTICS, SURVEYS		
FOCUS: DRILLING. U.S. E&P surge hinges on technology, not oil price	1-13	42
FOCUS: DRILLING. Sizing up well costs in most drilled depth ranges	1-13	44
FORECAST AND REVIEW: Revenue surge to sustain drilling in U.S. and Canada—Robert J. Beck and G. Alan Petzet	1-27	66
China drilling slipped in '95	1-27	97
MIDYEAR FORECAST. U.S. drilling may soften; Canada, world levels strong—G. Alan Petzet and Robert J. Beck	7-28	64
MIDYEAR FORECAST. Oil & Gas Journal well forecast for 1997	7-28	65
DRILLING REPORT. Rig-activity services use various methods to track drilling activity—Dean E. Gaddy	9-22	45
DRILLING REPORT. Rising oil demand, not oil price, increases drilling activity—C. Russell Luigs	9-22	56
HORIZONTAL DRILLING		
Model predicts drill pipe fatigue in horizontal wells—Jiang Wu	2-3	47
PRACTICAL DRILLING TECHNOLOGY. Integrating surface systems with downhole data improves underbalanced drilling—Larry Comeau	3-3	56
Cotton Valley reef pipeline, E&D expand	4-7	33
Horizontal drilling, 3D seismic driving Williston resurgence—Richard Wheatley	5-26	18
A geological assessment: What's ahead for Louisiana Austin chalk—William T. Maloy	6-2	149
FOCUS: DRILLING. Horizontal air drilling increases gas recovery in depleted zone—Jeffrey P. Elrod	6-30	49
FOCUS: PRODUCTION. HORIZONTAL COMPLETIONS—1: Proper drilling, displacing critical for open hole completions—Kevin D. Smejkal and W. L. Penberthy Jr.	7-21	71
Michigan to get horizontal and directional well projects—G. Alan Petzet	8-11	80
U.K. record well tops NW Europe action	11-17	31

	Date	Page
FOCUS: DRILLING. North German operator uses learning curve to improve horizontal drilling techniques—Juergen Schamp	12-1	69
Elk Hills ready for new horizontal drilling chapter	12-15	71
MAINTENANCE		
Mechanical oscillator frees stuck pipe strings using resonance technology—Buck Bernat and Henry Bernat	11-3	68
REMEDIAL SQUEEZE SYSTEMS—1: Remedial squeeze systems provide means to seal off trouble zones—Ronald E. Sweatman, Calvin W. Kessler, and John M. Hillier	12-8	56
REMEDIAL SQUEEZE SYSTEMS—2: Properly conducted squeeze procedures eliminate downhole troubles—Ronald E. Sweatman, Calvin W. Kessler, and John M. Hillier	12-15	42
MANAGEMENT		
Operators must become bigger stakeholders in technology—Jim Terry	7-21	49
Effective collaboration is the key to a successful operator/supplier relationship—John P. Clement III	10-13	47
Classification provides framework for ranking multilateral complexity and well type—Eric Diggins	12-29	73
OFFSHORE		
Npdes permits have increased emphasis on control of toxic pollutants—John A. Veil	1-6	46
BP tests offshore coiled tubing slim hole drilling	5-12	73
Jack up leg repair under way at drydock	5-19	28
New ultra-deepwater rig with dual rotaries will reduce costs—Jon C. Cole, Robert P. Herrmann, Robert J. Scott, and John M. Shaughnessy	5-26	69
Batch drilling in the North Sea expedites extended-reach drilling—Brian G. Teggart, Charles L. Dunne, and Richard D. Wilkinson	6-9	52
FOCUS: DRILLING. Offshore drilling activity increases demand for risers	6-30	64
Shell orders ultradeepwater semi for Gulf of Mexico work	7-7	30
Ultradeep drillship will react to heave with electric-compensating drawworks—Dean E. Gaddy	7-21	68
Sonic-while-drilling tool detects overpressured formations—Kai Hsu, Gerald N. Minerbo, Mohamed Hashem, Clarke L. Bean, and Richard Plumb	8-4	59
Multilateral casing-exit technology eliminates floating rig heave—Dean E. Gaddy	9-1	47
Galveston Bay gas prospects heating up—Alan Petzet	9-22	33
Floating dry dock and wheel-on-rail system expedites jack up repairs—Dean E. Gaddy	9-29	94
Ultrasonic processor reduces drill-cuttings size and eliminates subsea mounds—Dean E. Gaddy	10-6	80
Deepwater semi upgrade nearing completion	11-10	40
South China Sea reservoir prompts extended reach record—Kelly Talkington	11-10	67
FOCUS: DRILLING. Multiplex BOP system decreases riser disconnect time—Joseph R. Roche and Pete Fougere	12-1	86
PRACTICES		
Npdes permits have increased emphasis on control of toxic pollutants—John A. Veil	1-6	46
Low permeability filter cake limits damage from high-pH drilling fluids—Zhijun Wu, Younguan Hu	2-17	56
On-site generated nitrogen cuts cost of underbalanced drilling—Robert A. Downey	2-24	77
PRACTICAL DRILLING TECHNOLOGY. Integrating surface systems with downhole data improves underbalanced drilling—Larry Comeau	3-3	56
PRACTICAL DRILLING TECHNOLOGY. Closed surface system allows accurate monitoring of drilling returns—Geoff Whitehouse and Peter Stefureak	3-3	65
Method reduces errors in oil-based mud hydraulic calculations—Haiwang Sun	3-24	53
PAO lubricant inhibits bit balling, speeds drilling—Graham Mensa-Wilmot, Robert L. Garrett, and Rebecca S. Stokes	4-21	68
BP tests offshore coiled tubing slim hole drilling	5-12	73
Batch drilling in the North Sea expedites extended-reach drilling—Brian G. Teggart, Charles L. Dunne, and Richard D. Wilkinson	6-9	52
UNDERBALANCED DRILLING—1: Underbalanced drilling requires downhole pressure management—Zhihua Wang, Rolv Rommetveit, Aarnoud Bijleveld, Roberto Maglione, and Didier Gazaniol	6-16	54
FOCUS: DRILLING. Offshore drilling activity increases demand for risers	6-30	64
UNDERBALANCED DRILLING—Conclusion: Underbalanced drilling model simulates dynamic well bore conditions—Zhihua Wang, Erlend Vefring, Rolv Rommetveit, Taco Bieseman, Roberto Maglione, Antonio Lage, and Edson Nakagawa	7-7	62
Ultradeep drillship will react to heave with electric-compensating drawworks—Dean E. Gaddy	7-21	68
Low-head drilling avoids differential sticking and reduces formation damage—Manfred Kass, Jens-Christian Senger, and Manfred Sach	9-8	71
Ultrasonic processor reduces drill-cuttings size and eliminates subsea mounds—Dean E. Gaddy	10-6	80
Effective collaboration is the key to a successful operator/supplier relationship—John P. Clement III	10-13	47
South China Sea reservoir prompts extended reach record—Kelly Talkington	11-10	67
Cluster and dual-lateral drilling technologies optimize Russian well production—Ravil Gabdullinovich Salikhov, Evgeny Fedyorovich Dubrovin, and Vladimir Vladimirovich Sledkov	11-24	53
REMEDIAL SQUEEZE SYSTEMS—1: Remedial squeeze systems provide means to seal off trouble zones—Ronald E. Sweatman, Calvin W. Kessler, and John M. Hillier	12-8	56
REMEDIAL SQUEEZE SYSTEMS—2: Properly conducted squeeze procedures eliminate downhole troubles—Ronald E. Sweatman, Calvin W. Kessler, and John M. Hillier	12-15	42
Remote controlled, hydraulic swing-arm reduces tong handling efforts—Dean E. Gaddy	12-22	102
RESEARCH		
PRACTICAL DRILLING TECHNOLOGY. Virtual rheology and hydraulics improve use of oil and synthetic-based muds—Mario Zamora	3-3	43
Amoco opens drilling test facility to industry—R. V. Westermark and R. P. Bray	4-7	66
UNDERBALANCED DRILLING—Conclusion: Underbalanced drilling model simulates dynamic well bore conditions—Zhihua Wang, Erlend Vefring, Rolv Rommetveit, Taco Bieseman, Roberto Maglione, Antonio Lage, and Edson Nakagawa	7-7	62
Operators must become bigger stakeholders in technology—Jim Terry	7-21	49
DOE awards drilling systems research grants	11-17	34
RIGS (Land, Jack Ups, Drillships, Barges, etc.)		
Advanced jack up rig breaking U.S. construction drought—Paul Kelly	3-10	56
OFFSHORE PETROLEUM OPERATIONS. Caspian Sea MODU refurbished to western standards—Paul K. Prince and Dennis E. Yenzer	5-5	65
New ultra-deepwater rig with dual rotaries will reduce costs—Jon C. Cole, Robert P. Herrmann, Robert J. Scott, and John M. Shaughnessy	5-26	69
Calgary firm slates Siberian drilling	7-14	29
Multilateral casing-exit technology eliminates floating rig heave—Dean E. Gaddy	9-1	47
Another jack up restored to Gulf of Mexico service	9-1	30
Deep production climbs in Wyoming's Waltman field	9-1	80
Rig concerns don't stem gulf sale confidence	9-8	36
Counting the rigs—Dean E. Gaddy	9-22	19
DRILLING REPORT. Rig-activity services use various methods to track drilling activity—Dean E. Gaddy	9-22	45
DRILLING REPORT. Onshore rig surplus diminishes as demand rises—Eugene M. Isenberg	9-22	62
Floating dry dock and wheel-on-rail system expedites jack up repairs—Dean E. Gaddy	9-29	94
Reed: U.S. rig fleet indicators on the rise—Dean E. Gaddy	10-20	36
Unusual leg positioning highlights jack up move to Argentina	10-20	37
Deepwater semi upgrade nearing completion	11-10	40
SAFETY		
FOCUS: DRILLING. Multiplex BOP system decreases riser disconnect time—Joseph R. Roche and Pete Fougere	12-1	86

PRODUCTION

ACID TREATMENT		
In situ gels improve formation acidizing—Valerie Yeager and Chris Shuchart	1-20	70
Process, optimized acidizing reduce production facility upsets—Syed A. Ali, Donald G. Hill, S. Bruce McConnell, and Michael R. Johnson	2-10	44
ANALYSIS		
New gas pseudocritical property equations developed—Khaled A. Abd-El Fattah	6-2	144
Program solves for oil well inflow performance—Roy Engineer and Gary Grillette	6-23	60

	Date	Page
Density, phase behavior keys to acid gas injection—John J. Carroll and David W. Lui	6-23	63
Interference tests verify reservoir continuity, offshore Africa—Neil Humphreys, Larry Myers, Arlene G. Pollin, Steve Hill, and Ian Treherne	11-3	75
BACTERIA AND BACTERIAL CONTROL		
Organoclay cost effectively removes oil from produced water—George Alther	4-14	54
COALBED METHANE		
Central-northern Appalachian coalbed methane flow grows—Paul C. Lyons	7-7	76
COMPLETIONS		
New test identifies completion fluid compatibility problems—Syed A. Ali, David C. Shelby, D. C. Wagner, and William E. Foxenberg	8-25	95
HORIZONTAL COMPLETIONS—CONCLUSION: Gravel packing prevents productivity decline—W. L. Penberthy Jr., Kenneth L. Bickham, and H. T. Nguyen	9-1	56
COMPUTERS, Programs		
New software improves geological visualization	1-6	39
Program solves for gas well inflow performance—Roy Engineer and Gary Grillette	10-20	54
MANAGEMENT PERSPECTIVE: How oil firms can control runaway enterprise-wide software systems—Stuart Diamond	11-17	25
CORROSION		
Flexible pipe combats corrosion threat at sour brine injection site—Donald H. Wolfe and John J. Baron	6-9	48
COST		
Dutch offshore operators cut production costs	4-14	25
U.S. gasoline production hits record high	6-23	30
Upstream operations generating cash flow, returns for oil/gas producers	9-8	28
E&D outlays, revenues hit 5-year high in '96	10-27	39
EMULSIONS AND TREATING		
Polymer particulates control fluid loss during well completions—Syed A. Ali, Philip D. Nguyen, and Jimmie D. Weaver	5-12	65
Pemex launches massive Cantarell project	10-20	38
Joint tester reduces hydrocarbon leaks	12-15	32
ENHANCED RECOVERY METHODS		
Gels correct in-depth reservoir permeability variation—Julie E. Smith and James C. Mack	1-6	33
Jet pump feeds corrosion inhibitor in Russian waterflood—I. S. Yuden, Y. A. Sazanov, V. N. Yeliseev, and B. A. Malov	1-27	88
Big Canadian miscible CO_2 EOR project, pipeline advance	7-7	23
EQUIPMENT		
OFFSHORE TOPSIDES—1: Decision trees aid production facility design—John J. MacDonald and Robert S. Smith	2-17	42
FOCUS: PRODUCTION. Frac simulator available for industry applications	7-21	80
HORIZONTAL COMPLETIONS—2: Stand-alone screens vary in effectiveness—Bennett M. Richard, James M. Montagna, and W. L. Penberthy Jr.	8-11	63
FOCUS: PRODUCTION. Vibration suppression critical in FPSO design, offshore Thailand	11-24	77
FIELD OPERATIONS		
Improved gas lift proposed for Hungarian field—Gabor Takacs and Zoltan Turzo	7-7	57
Instantaneous flow rates overstate gas release determination—Milton R. Beychok	7-28	80
OFFSHORE NORTHERN EUROPE. World's first subsea separation and injection plant destined for Troll C—David Knott	8-25	66
New test identifies completion fluid compatibility problems—Syed A. Ali, David C. Shelby, D. C. Wagner, and William E. Foxenberg	8-25	95
PRODUCTION REPORT. Technology tackles low-permeability sand in South Texas—Terry E. Swift and Paul Mladenka	9-29	68
Program solves for gas well inflow performance—Roy Engineer and Gary Grillette	10-20	54
Interference tests verify reservoir continuity, offshore Africa—Neil Humphreys, Larry Myers, Arlene G. Pollin, Steve Hill, and Ian Treherne	11-3	75
FOCUS: PRODUCTION. Real-time automation optimizes production economics in Oman—Ron Cramer, Cleon Dunham, and Alley Al Hinai	11-24	65
FLUID INJECTION		
Flexible pipe combats corrosion threat at sour brine injection site—Donald H. Wolfe and John J. Baron	6-9	48
FORECASTS, TRENDS, STATISTICS, SURVEYS		
Worldwide crude oil and gas production	1-13	70
API sees signs U.S. production slide slowing	1-20	33
Worldwide crude oil and gas production	2-10	68
FOCUS: PRODUCTION. Deepwater Gulf of Mexico more profitable than previously thought—Michael J. K. Craig and Steven T. Hyde	3-10	41
Worldwide crude oil and gas production	3-10	85
Worldwide crude oil and gas production	4-14	109
AFRICA REPORT. Legal improvements brighten North Africa production outlook	5-12	48
Worldwide crude oil and gas production	5-12	85
Worldwide crude oil and gas production	6-9	77
Worldwide crude oil and gas production	7-14	78
Worldwide crude oil and gas production	8-11	84
OFFSHORE NORTHERN EUROPE. Northwest Europe's operators show creativity in new developments—David Knott	8-25	49
MANAGEMENT PERSPECTIVE: Can the E&P industry avoid future shock?—David Murphy, Chris Friedemann, and Ricardo Castro	9-8	23
Worldwide crude oil and gas production	10-13	109
Mobile Bay gas enjoying banner year despite production problems—William W. Wade and Jay Plater	11-10	29
Worldwide crude oil and gas production	11-10	95
Worldwide crude oil and gas production	12-8	75
WORLDWIDE PRODUCTION. Depletion patterns show change due for production of conventional oil—C. J. Campbell	12-29	33
WORLDWIDE PRODUCTION. Worldwide look at reserves and production	12-29	38
WORLDWIDE PRODUCTION. Survey	12-29	42
FRACTURING		
Unconsolidated sand grain shape, size impact frac-pack design—Edouard Wang and Mukul M. Sharma	5-19	67
Chemical hooks keep proppant in place—Philip D. Nguyen and Jimmie D. Weaver	9-8	84
Low-polymer borate frac fluid cleans up thoroughly—Mike Wiskofske, Matt Wiggins, and Joe Yaritz	9-15	42
GAS LIFT		
Density, phase behavior keys to acid gas injection—John J. Carroll and David W. Lui	6-23	63
Improved gas lift proposed for Hungarian field—Gabor Takacs and Zoltan Turzo	7-7	57
HEAVY OILS		
Technology pushes Venezuela's heavy-oil projects ahead—J. Inciarte	12-8	52
Economic models verify heavy oil profitability—G. Warfield Hobbs IV and Robert O. Winkler	12-22	91
HORIZONTAL WELLS		
FOCUS: PRODUCTION. HORIZONTAL COMPLETIONS—1: Proper drilling, displacing critical for open hole completions—Kevin D. Smejkal and W. L. Penberthy Jr.	7-21	71
Horizontal well kick-starts California field	8-18	72
HORIZONTAL COMPLETIONS—CONCLUSION: Gravel packing prevents productivity decline—W. L. Penberthy Jr., Kenneth L. Bickham, and H. T. Nguyen	9-1	56
LEASE AUTOMATION		
FOCUS: PRODUCTION. Real-time automation optimizes production economics in Oman—Ron Cramer, Cleon Dunham, and Alley Al Hinai	11-24	65
LOGGING (Formation, Spinner, etc.)		
Raster logs may be basis for a geologic workstation—Scott L. Montgomery	4-7	84
Sonic-while-drilling tool detects overpressured formations—Kai Hsu, Gerald N. Minerbo, Mohamed Hashem, Clarke L. Bean, and Richard Plumb	8-4	59
MAINTENANCE		
Method estimates arctic well thermal insulation efficiency—I. M. Kutasov	10-6	82
Gels, monomer solutions fix pinhole casing leaks—Prentice Creel and Ron Crook	10-13	44
MANAGEMENT		
OFFSHORE TOPSIDES—CONCLUSION: Decision trees clarify novel technology applications—John J. MacDonald and Robert S. Smith	2-24	69

	Date	Page
PRODUCTION REPORT. Permeability profiles provide new reservoir management tools—Dan Georgi, Ekrem Kasap, Mehmet Altunbay, and Xiaoming Tang	9-29	74
Index useful for evaluating petroleum fiscal systems—Daniel Johnston	12-1	49

OFFSHORE

OFFSHORE TOPSIDES—1: Decision trees aid production facility design—John J. MacDonald and Robert S. Smith	2-17	42
FOCUS: PRODUCTION. Deepwater Gulf of Mexico more profitable than previously thought—Michael J. K. Craig and Steven T. Hyde	3-10	41
Polymer particulates control fluid loss during well completions—Syed A. Ali, Philip D. Nguyen, and Jimmie D. Weaver	5-12	65
Non-OPEC offshore output challenging OPEC	5-19	31
New lift system tested in gulf	5-19	76
OFFSHORE NORTHERN EUROPE. Northwest Europe's operators show creativity in new developments—David Knott	8-25	49
OFFSHORE NORTHERN EUROPE. World's first subsea separation and injection plant destined for Troll C—David Knott	8-25	66
OFFSHORE NORTHERN EUROPE. Extended well testing boosts prospects for development of marginal fields—Tom Leeson	8-25	72
SOUTH AFRICA OFFSHORE E&P—1: Exploration to first production on Block 9 off South Africa—Paul L. A. Burden and Christopher P. N. Davies	9-8	92
SOUTH AFRICA OFFSHORE E&P—2: Oribi field is South Africa's first offshore crude oil production—Paul L. A. Burden and Christopher P. N. Davies	9-15	63
PRODUCTION REPORT. Water depth production record set off Brazil—Pedro J. Barusco F., Ricardo Juiniti, and Marcos G. G. Morais	9-29	59
U.K. operators mark progress with floaters	11-3	26
Operators mull new deepwater concepts	11-10	36
South China Sea reservoir prompts extended reach record—Kelly Talkington	11-10	67
Foinaven start tops NW Europe action	12-8	21
U.S. independents unaware of set-aside rule	12-15	28
Shell sets up deepwater E&P division	12-29	24

OFFSHORE PLATFORMS

First spar facility installed in the Gulf of Mexico	1-13	53
THE GULF OF MEXICO'S REVIVAL. SeaStar TLP due first installation in Gulf of Mexico	1-20	42
OFFSHORE TOPSIDES—CONCLUSION: Decision trees clarify novel technology applications—John J. MacDonald and Robert S. Smith	2-24	69
Field abandonment costs vary widely worldwide—Ashley Pittard	3-17	84
Ram-Powell TLP nears installation in gulf	4-21	33
OFFSHORE PETROLEUM OPERATIONS. Gras Dowr joins world's FPSO fleet	5-5	84
OFFSHORE PETROLEUM OPERATIONS. Cold-forged connector ties back well risers in Congo field—William M. Taylor, Marc Tison, and Andre Bahoumina	5-5	90
Hibernia will emphasize electronic documentation—Tor Stavnes and Alan C. Kearley	5-5	115
Hibernia concrete drilling-production platform starts tow-out	6-2	32
Platform serves as pipeline hub, production facility	6-30	70
Man-made island exploits shallow water offshore China—Lu Jichen	7-14	65
FOCUS: PRODUCTION. Platforms will handle sour streams offshore India	7-21	81
OFFSHORE NORTHERN EUROPE. Aker develops new floating production concept for small fields	8-25	65
FOCUS: PRODUCTION. Debottlenecking to increase production from Neptune spar—Guntis Moritis	11-24	72
ABANDONING OFFSHORE PLATFORMS. Industry tackles offshore decommissioning—Guntis Moritis	12-8	33
ABANDONING OFFSHORE PLATFORMS. Offshore-platform decommissioning perceptions change—Ron Twachtman	12-8	38
ABANDONING OFFSHORE PLATFORMS. Governments grapple with abandonment fiscal terms—Ashley Pittard	12-8	42
Joint tester reduces hydrocarbon leaks	12-15	32

OPERATING IDEAS

Process, optimized acidizing reduce production facility upsets—Syed A. Ali, Donald G. Hill, S. Bruce McConnell, and Michael R. Johnson	2-10	44
Field abandonment costs vary widely worldwide—Ashley Pittard	3-17	84
Equations determine reasonable rod pump submergence depth—Hu Yongquan and Cai Wizhong	3-24	65
Coiled tubing facilitates deep underbalaced workover—Larry S. Adams and Charles C. Overstreet	3-31	64
Acid gas injection eliminates sulfur recovery expense—Edward Wicher and Tom Royan	4-28	67
New lift system tested in gulf	5-19	76
Instantaneous flow rates overstate gas release determination—Milton R. Beychok	7-28	80
HORIZONTAL COMPLETIONS—2: Stand-alone screens vary in effectiveness—Bennett M. Richard, James M. Montagna, and W. L. Penberthy Jr.	8-11	63
Offsite oil field waste disposal varies across U.S.—John A. Veil	11-17	79

PUMPING

Equations determine reasonable rod pump submergence depth—Hu Yongquan and Cai Wizhong	3-24	65
Tests pinpoint sucker-rod failures—F. Elshawesh, A. Elhoud, and E. Elagdel	5-26	59

RESEARCH

FOCUS: PRODUCTION. Frac simulator available for industry applications	7-21	80
Chemical hooks keep proppant in place—Philip D. Nguyen and Jimmie D. Weaver	9-8	84

RESERVES

FOCUS: PRODUCTION. Major oil, gas reserve additions reported	3-10	54
RESERVES GROWTH: GEOLOGY, TECHNOLOGY, AND ECONOMICS. Technology pushes reserves 'crunch' date back in time—N. J. Smith and G. H. Robinson	4-7	43
RESERVES GROWTH: GEOLOGY, TECHNOLOGY, AND ECONOMICS. Better understanding urged for rapidly depleting reserves—C. J. Campbell	4-7	51
CENTRAL ASIAN FSU. Caspian reserves luring operators—Frank C. Alexander Jr.	7-21	23
Monterey Resources agrees to Texaco merger	8-25	38
Mobile Bay gas enjoying banner year despite production problems—William W. Wade and Jay Plater	11-10	29
Operators mull new deepwater concepts	11-10	36
Canada's Hibernia oil field on stream at last	11-24	42

RESERVOIR STUDIES

Gels correct in-depth reservoir permeability variation—Julie E. Smith and James C. Mack	1-6	33
Program solves for oil well inflow performance—Roy Engineer and Gary Grillette	6-23	60
PRODUCTION REPORT. Permeability profiles provide new reservoir management tools—Dan Georgi, Ekrem Kasap, Mehmet Altunbay, and Xiaoming Tang	9-29	74

SEPARATION

SEPARATION (oil, gas, water) Vortex tube can increase liquid hydrocarbon recovery at plant inlet—Brock Hajdik, Manfred Lorey, Jürgen Steinle, and Keith Thomas	9-8	76

WATER DISPOSAL

Biochemical degradation treats produced water	1-20	72
Organoclay cost effectively removes oil from produced water—George Alther	4-14	54
Offsite oil field waste disposal varies across U.S.—John A. Veil	11-17	79

WELL STIMULATION

In situ gels improve formation acidizing—Valerie Yeager and Chris Shuchart	1-20	70
Low-polymer borate frac fluid cleans up thoroughly—Mike Wiskofske, Matt Wiggins, and Joe Yaritz	9-15	42

WELL TESTING

OFFSHORE NORTHERN EUROPE. Extended well testing boosts prospects for development of marginal fields—Tom Leeson	8-25	72
Statoil results off Ireland not good	9-1	36

WORKOVERS, REPAIRS, RECOMPLETION

WORKOVERS, REPAIRS, RECOMPLETION Gels correct in-depth reservoir permeability variation—Julie E. Smith and James C. Mack	1-6	33
Coiled tubing facilitates deep underbalaced workover—Larry S. Adams and Charles C. Overstreet	3-31	64

GAS PROCESSING

ANALYSIS

New equations calculate Claus unit sulfur-recovery efficiency—Michael Anderson	11-17	73

	Date	Page
COSTS		
Thai government cuts LPG subsidies	12-29	22
Research targets lower gas-processing operating costs—Howard S. Meyer and Dennis Leppin	12-29	83
FORECASTS, TRENDS, STATISTICS, SURVEYS		
NATURAL GAS IN THE MIDDLE EAST. Gas projects surge in the Middle East as governments seek new revenue sources—Michael D. Williams	2-24	54
WORLDWIDE CONSTRUCTION. Sulfur—Marilyn Radler	4-14	82
WORLDWIDE CONSTRUCTION. Gas Processing—Marilyn Radler	4-14	84
WORLDWIDE GAS PROCESSING. LNG report—Amos Avidan	6-2	49
WORLDWIDE GAS PROCESSING. World economic growth pushing LNG use—Robert L. Brown and Roxanna Clary	6-2	60
WORLDWIDE GAS PROCESSING. Project financing knits parts of costly LNG supply chain—Robert J. Minyard and Michael O. Strode	6-2	66
Rising LNG/LPG use to expand carrier fleets	9-22	26
WORLDWIDE CONSTRUCTION Sulfur—Marilyn Radler	10-13	79
WORLDWIDE CONSTRUCTION Gas Processing—Marilyn Radler	10-13	84
GAS SWEETENING		
GAS SWEETENING S_8 threatens natural gas operations, environment—Andre-Bernard Chesnoy and David J. Pack	4-28	74
LIQUEFIED NATURAL GAS (LNG)		
U.S. LNG imports 1996-1997 should recover from low 1995 levels—Edward J. Swain	1-27	84
NATURAL GAS IN THE MIDDLE EAST. Qatargas exporting LNG from Qatar's new Ras Laffan port	2-24	49
NATURAL GAS IN THE MIDDLE EAST. LNG projects make progress in Oman and Yemen	2-24	62
S. Koreans buy into Oman LNG project	3-17	28
Prospects brightening for LNG-fired power	3-24	29
FOCUS: PIPELINES. World's largest in-ground LNG tanks installed	3-24	52
Largest North American LNG complex on tap	4-14	26
New LNG scheme eyed for northern Australia	5-26	29
Oman marks progress on LNG export project	6-2	34
Thailand sending mixed signals on status of Omani LNG deal	6-2	36
Egyptian LNG project marks progress	6-2	44
WORLDWIDE GAS PROCESSING. U.S., Canada continue dominance of world's gas processing—Warren R. True	6-2	50
WORLDWIDE GAS PROCESSING. LNG links remote supplies and markets—Amos A. Avidan, Robert E. Gardner, Daniel Nelson, Eugene N. Borrelli, and Tara J. Rethore	6-2	54
WORLDWIDE GAS PROCESSING. World economic growth pushing LNG use—Robert L. Brown and Roxanna Clary	6-2	60
WORLDWIDE GAS PROCESSING. Project financing knits parts of costly LNG supply chain—Robert J. Minyard and Michael O. Strode	6-2	66
WORLDWIDE GAS PROCESSING. Technology advances keeping LNG cost-competitive—Edward J. Bellow Jr., Fouad P. Ghazal, Alan J. Silverman, and Stephen D. Myers	6-2	74
WORLDWIDE GAS PROCESSING. LNG fleet increases in size and capabilities—Henry J. Linser Jr., Michael J. Drudy, Fred Endrizzi, and Anthony A. Urbanelli	6-2	79
Gas-to-liquids projects gaining momentum as process list grows—David Knott	6-23	16
DOE plans gas-to-liquids conventional transportation project	6-23	20
Design advanced for large-scale, economic, floating LNG plant—Marie M. Naklie	6-30	66
India advancing LNG for power generation initiative	7-7	26
LNG scheme proposed in British Columbia	7-7	26
Japanese firms join BG in India LNG scheme	8-11	32
India attracting foreign firms with LNG deals	9-8	37
Rising LNG/LPG use to expand carrier fleets	9-22	26
Japanese firms eye Alaskan LNG project stake	9-29	50
Caribbean LNG project marks progress; LNG tanker launched	10-20	52
EIA: LNG trade entering expansion period	10-27	30
U.K. sees first deliveries by LNG trucks	10-27	32
LNG vs. GTL: taking the battle to sea—David Knott	10-27	33
Concrete deemed best option for LNG floater hull	11-10	37
Two Indian LNG projects approved	12-8	23
LNG plant eyed for Norwegian Sea fields	12-15	24
Puerto Rico project to take Trinidad LNG	12-22	27
Thailand's economic crisis affecting gas strategy, projects	12-29	18
Thai government cuts LPG subsidies	12-29	22
LIQUEFIED PETROLEUM GAS (LPG)		
AFRICA REPORT. Africa gaining importance in world LPG trade—Rick R. Haun, Ken W. Otto, and S. Craig Whitley	5-12	56
U.S. LPG pipeline begins deliveries to Pemex terminal—Kevin C. Bodenhamer	8-11	55
Rising LNG/LPG use to expand carrier fleets	9-22	26
LPG-recovery processes for baseload LNG plants examined—Chen-Hwa Chiu	11-24	59
MAINTENANCE		
Argentine plant increases capacity, improves NGL recoveries—Joe T. Lynch and César L. Fernández	10-6	74
NATURAL GAS LIQUIDS		
Large U.S. liquids plant starts up—Paul B. Milios and Richard A. Harris	5-12	60
NGL recovery being hiked by natural-gasoline recirculation—Margiori Rivas M., José Luis Bracho, and James E. Murray	7-7	67
Second group eyes gas-to-liquid membrane process	9-15	27
ARCO confirms giant Indonesian gas strike	9-15	30
OFFSHORE		
Design advanced for large-scale, economic, floating LNG plant—Marie M. Naklie	6-30	66
Cost-cutting for offshore sulfur recovery processes studied—Michael P. Quinlan, Linda Echterhoff, Dennis Leppin, and Howard S. Meyer	7-21	54
OFFSHORE NORTHERN EUROPE. World's first subsea separation and injection plant destined for Troll C—David Knott	8-25	66
PLANT PRACTICES		
Multivariable control benefits Alberta plant—Kevin Collins, Steven Treiber, and John Walker	5-5	118
Canadian plant ups C3 recovery without more dehydration—C. James Bell and Yuv R. Mehra	9-29	86
PLANTS, Construction		
Abu Dhabi plant on track for major expansion	2-17	52
Large U.S. liquids plant starts up—Paul B. Milios and Richard A. Harris	5-12	60
Argentine gas plant expansion makes most of existing infrastructure—Kevin Kernan and Daniel Carranza	5-26	64
U.S. gulf-related gas processing to expand	8-4	32
WORLDWIDE CONSTRUCTION Gas Processing—Marilyn Radler	10-13	84
Viet Nam slates its first gas processing plant	11-3	32
Venezuelan firm cuts gas-plant costs with 3D modeling	12-22	99
PLANTS, General		
LPG-recovery processes for baseload LNG plants examined—Chen-Hwa Chiu	11-24	59
POLLUTION CONTROL		
S_8 threatens natural gas operations, environment—Andre-Bernard Chesnoy and David J. Pack	4-28	74
PROCESSES		
NGL recovery being hiked by natural-gasoline recirculation—Margiori Rivas M., José Luis Bracho, and James E. Murray	7-7	67
Cost-cutting for offshore sulfur recovery processes studied—Michael P. Quinlan, Linda Echterhoff, Dennis Leppin, and Howard S. Meyer	7-21	54
Vortex tube can increase liquid hydrocarbon recovery at plant inlet—Brock Hajdik, Manfred Lorey, Jürgen Steinle, and Keith Thomas	9-8	76
Canadian plant ups C3 recovery without more dehydration—C. James Bell and Yuv R. Mehra	9-29	86
New equations calculate Claus unit sulfur-recovery efficiency—Michael Anderson	11-17	73
STORAGE		
STORAGE CAVERN GAS STORAGE—1: Downhole probes evaluate cavern integrity—N. Graeme Crossley	3-3	74
CAVERN GAS STORAGE—Conclusion: Site tests validate benefits of cavern probes—N. Graeme Crossley	3-10	69
FOCUS: PIPELINES. World's largest in-ground LNG tanks installed	3-24	52
Concrete deemed best option for LNG floater hull	11-10	37
TRANSPORT		
TRANSPORT NATURAL GAS IN THE MIDDLE EAST. Qatargas exporting LNG from Qatar's new Ras Laffan port	2-24	49
WORLDWIDE GAS PROCESSING. LNG fleet increases in size and capabilities—Henry J. Linser Jr., Michael J. Drudy, Fred Endrizzi, and Anthony A. Urbanelli	6-2	79
U.K. sees first deliveries by LNG trucks	10-27	32

PIPELINE

GENERAL

Cost

	Date	Page
FERC upholds key rulings in flurry of action	3-10	28
Tanker operators face insurance cost hikes	3-17	28
BG must accept gas transport charge cuts	6-23	26
FOCUS: PIPELINES. Developments advance subsea pipelaying, inspection, repair	9-15	57
Pipeline rehab vs. replacement depends on condition, service—Kamal Morsi, Hesham Bayoumi, and David Robson	9-22	68

Forecasts, Trends, Statistics, Surveys

WORLD PIPELINE CONSTRUCTION. World pipeline construction looks to remain robust to century's turn—Warren R. True	2-10	34
WORLDWIDE CONSTRUCTION. Pipeline—Marilyn Radler	4-14	89
Phillips eyes Texas-Arizona products line	5-5	56
European pipeline spills down in 1995	5-19	72
FOCUS: PIPELINES. National pipeline map for U.S. being developed—Patrick Crow	6-16	51
PIPELINE ECONOMICS. Construction plans jump; operations skid in 1996—Warren R. True	8-4	37
RUSSIA REPORT. Pipeline gas trade between Asian Russia, Northeast Asia gets fresh look—Keun-Wook Paik and Jae-Yong Choi	8-18	41
Surge in gulf gas will impact Louisiana facilities—Rebecca B. Roberts	8-18	45
Czech crude-oil supplies diversified by new pipeline—Bretislav Karásek and Miroslav Cibulka	8-25	84
WORLDWIDE CONSTRUCTION. Pipelines—Marilyn Radler	10-13	88
Cross-border gas-pipeline projects face daunting challenges—Djamel Eddine Khene	12-15	33

Management

Pipeline code, unitization top Texas issues—Richard Wheatley	5-5	46
FOCUS: PIPELINES. U.S. risk management can reduce regulation, enhance safety—Theodore L. Willke, Theresa M. Shires, R. Michael Cowgill, and Bernd J. Selig	6-16	37
FOCUS: PIPELINES. National pipeline map for U.S. being developed—Patrick Crow	6-16	51

Safety

DOT: Colonial must improve safety	3-3	28
Oil industry experience may explain TWA air disaster	3-3	73
NTSB urges Conoco shipping improvements	4-21	28
FOCUS: PIPELINES. U.S. risk management can reduce regulation, enhance safety—Theodore L. Willke, Theresa M. Shires, R. Michael Cowgill, and Bernd J. Selig	6-16	37
RSPA mulls risk management bids	11-17	40

Crude

California oil line finally gets green light	5-5	54
Caspian pipeline partners sign project accord	5-26	32
Line extension part of Colombian production surge—John Skalski	7-28	67
WORLDWIDE CONSTRUCTION. Pipelines—Marilyn Radler	10-13	88

Natural Gas

SW Queensland pipeline starts up	1-20	28
Gazprom and Neste plan North European gas pipeline	2-10	38
WORLD PIPELINE CONSTRUCTION. Gazprom and Neste plan North European gas pipeline	2-10	38
WORLD PIPELINE CONSTRUCTION. Distrigaz slates project spending tied to Interconnector	2-10	40
TransCanada group gets Mexican pipeline nod	3-31	38
PanEnergy slates two gas pipeline projects	3-31	38
Argentina's TGN changes to increase supply, ensure delivery—Ricardo Markous and Pablo Pettinaroli	3-31	73
Columbia slates gas pipeline to Northeast U.S.	4-14	28
Tennessee Gas joins U.S. Northeast gas pipeline fray	4-14	28
GasAndes will flow by midyear—Warren R. True	4-21	61
Accord inked for Pakistan-Turkmenistan line	8-4	25
Wingas starts work on Yamal gas link	8-25	36
Firms to study Thai onshore gas line	8-25	36
Mexico's first open access gas line funded	10-6	34
WORLDWIDE CONSTRUCTION. Pipelines—Marilyn Radler	10-13	88
Sable Island gas pipeline project approved	11-3	28
Turkmen-Pakistani export gas pipeline marks progress	11-3	31
Coastal wins nod on Victoria pipeline	11-17	38
Malaysia's Peninsular Gas system gets another segment—C. F. Savini	12-1	54
Cross-border gas-pipeline projects face daunting challenges—Djamel Eddine Khene	12-15	33

Products

Texaco plans Louisiana NGL system expansion	4-28	38
Computer model designs African multiproducts line extension—Janusz Stuchly and Chris Kedge	7-14	47
U.S. LPG pipeline begins deliveries to Pemex terminal—Kevin C. Bodenhamer	8-11	55
Tanker designed to carry products	11-17	42

CONSTRUCTION PRACTICES

Equipment

BP proves diverless connection method in Foinaven	9-1	32

Line Pipe

Procedure improves line pipe Charpy test interpretation—Michael J. Rosenfeld	4-14	40
FOCUS: PIPELINES. Procedures, considerations for welding X-80 line pipe established—Hans-Georg Hillenbrand, Kurt A. Niederhoff, Günter Hauck, Ernst Perteneder, and Gerhard Wellnitz	9-15	47
PIPELINE REPORT. New method determines effect of concrete coating on pipe-collapse pressure—Alexander Aynbinder	10-27	57

Methods

FOCUS: PIPELINES. Diverless tie-in tool gets first test on deepwater line—David Knott	3-24	48

Welding

FOCUS: PIPELINES. Procedures, considerations for welding X-80 line pipe established—Hans-Georg Hillenbrand, Kurt A. Niederhoff, Günter Hauck, Ernst Perteneder, and Gerhard Wellnitz	9-15	47

OPERATION AND DESIGN

Analysis

Gas-sampling accuracy unaffected by in-line separator—V. C. Ting	1-13	54
Holdup predictions for wet-gas pipelines compared—Richard H. Shea, Jon Rasmussen, Paal Hedne, and Dag Malnes	5-19	73
Simple rule can be used to calculate friction loss in piping—Alejandro Anaya Durand	5-26	77

Automation, Controls

FOCUS: PIPELINES. New demands for pipeline shaping scada systems—Ray S. Whaley and Michael L. Wheeler	3-24	41
New vehicle choices hiking U.S. fuels use	9-1	38

Compressors

FOCUS: PIPELINES. Electric-motor drives installed in New Mexico	6-16	48
New turbo units going to U.K.	6-23	59

Computers/Microcomputers

Asset management installed on Mapco system	3-31	72

Corrosion

New line pipe resists preferential corrosion at welds—Sigeru Endo, Sakae Fujita, Moriyasu Nagae, and Osamu Hirano	3-17	92
OFFSHORE PETROLEUM OPERATIONS. Tests show best corrosion inhibitors for high pressure, temperature pipeline—Gale B. Farquhar, Richard D. Kane, Dharma Abayarathna, and David H. Sanders	5-5	96

Design Concepts

World's longest sulfur pipeline operating smoothly after 3 years—J. E. Lawrence, John J. Baron, and Graeme G. King	1-20	59
Holdup predictions for wet-gas pipelines compared—Richard H. Shea, Jon Rasmussen, Paal Hedne, and Dag Malnes	5-19	73
FOCUS: PIPELINES. New versions of gas turbine being shipped	9-15	60
PIPELINE REPORT. New method determines effect of concrete coating on pipe-collapse pressure—Alexander Aynbinder	10-27	57
New friction factor derived from study of Egyptian gas-field pipeline—N. El-Emam, F. K. Gad, A. Safwat Nafey, and N. Zoghaib	11-10	72

Inspection

FOCUS: PIPELINES. Developments advance subsea pipelaying, inspection, repair	9-15	57

Maintenance

Gas-sampling accuracy unaffected by in-line separator—V. C. Ting	1-13	54
World's longest sulfur pipeline operating smoothly after 3 years—J. E. Lawrence, John J. Baron, and Graeme G. King	1-20	59

	Date	Page
Alyeska program allows pig performance comparison—Patrick H. Vieth, Steven W. Rust, Elden R. Johnson, and Michael L. Cox	2-10	52
Pipeline rehab vs. replacement depends on condition, service—Kamal Morsi, Hesham Bayoumi, and David Robson	9-22	68
Ice plug employed on subsea pipeline bend during repair	12-22	101
MULTIPHASE FLOW		
Offshore		
New line pipe resists preferential corrosion at welds—Sigeru Endo, Sakae Fujita, Moriyasu Nagae, and Osamu Hirano	3-17	92
FOCUS: PIPELINES. Diverless tie-in tool gets first test on deepwater line—David Knott	3-24	48
OFFSHORE PETROLEUM OPERATIONS. Dredger works for North Sea pipelays	5-5	82
OFFSHORE PETROLEUM OPERATIONS. Tests show best corrosion inhibitors for high pressure, temperature pipeline—Gale B. Farquhar, Richard D. Kane, Dharma Abayarathna, and David H. Sanders	5-5	96
Gulf of Mexico pipelay	6-23	59
Surge in gulf gas will impact Louisiana facilities—Rebecca B. Roberts	8-18	45
Gulf of Mexico sour crude-oil lines to see increase	8-18	50
Sable gas project tied to timely pipeline nod	10-27	30
PIPELINE REPORT. Enchilada platform anchors offshore Louisiana transportation network—Dale M. Gallaher and Michael J. Mahoney	10-27	45
Ice plug employed on subsea pipeline bend during repair	12-22	101
Practices		
Procedure improves line pipe Charpy test interpretation—Michael J. Rosenfeld	4-14	40
Pumps		
Ocensa's pumps key to meeting production goals	7-28	71
Stations		
Alyeska to close two more TAPS pump stations	5-5	54
Shell to buy Gulf U.K. retail operations	9-1	40
PIPELINE REPORT. Canadian crude terminal resolves tank-odor problems—Robert Wrubleski, Gordon Ferg, Daryl Perrin, Dayle Chadbourne, and David Picard	10-27	50
Storage		
TANK GAUGING—1: Review of tank measurement errors reveals techniques for greater accuracy—Frank J. Berto	3-3	68
CAVERN GAS STORAGE—1: Downhole probes evaluate cavern integrity—N. Graeme Crossley	3-3	74
TANK GAUGING—Conclusion: Automatic gauging technologies have advanced, but better accuracy is needed—Frank J. Berto	3-10	63
OTHER TRANSPORTATION		
Tankers and Barges		
Laybarge floated from Gulf of Mexico seabed	1-6	45
Tanker operators face insurance cost hikes	3-17	28
Clarkson: Crude tanker outlook is bullish	8-4	26
Caribbean LNG project marks progress; LNG tanker launched	10-20	52
MANAGEMENT PERSPECTIVE: Incentives needed to expand India's oil transportation infrastructure—Mohan Malhotra	10-27	27
Japanese, South Korean yards get 10 tanker orders	11-17	40
ARCO orders two new-generation oil tankers	11-17	42
Tanker designed to carry products	11-17	42
Maxus sells power from Indonesian floater	11-24	36
Crude-laden double-hulled tanker survives gash without a spill	11-24	44
Work barge ready for gulf work	12-1	41
Terminals		
Czech crude-oil terminal is in operation—Bretislav Karasek and Miroslav Cibulka	2-3	54
Phillips eyes Texas-Arizona products line	5-5	56
Latest Peruvian privatization sale back on track	9-22	36
MANAGEMENT PERSPECTIVE: Incentives needed to expand India's oil transportation infrastructure—Mohan Malhotra	10-27	27
PIPELINE REPORT. Canadian crude terminal resolves tank-odor problems—Robert Wrubleski, Gordon Ferg, Daryl Perrin, Dayle Chadbourne, and David Picard	10-27	50
TRANSPORTATION, GENERAL		
General		
North Slope producers see Alaska renaissance as TAPS reaches 20	6-16	22
Alyeska reorganizing structure of TAPS operations	6-16	26
Towout successful, installation begins on Hibernia platform	6-16	29
Pipelaying under way for Marathon's deepwater gulf projects	9-1	25
Proposed Lines and Expansion		
Malaysia pipeline to carry 2 million b/d	1-13	30
Hydro plans Oseberg-Statpipe gas line	1-13	30
Iraq and Turkey plan gas export pipeline	1-20	30
Two eastern Gulf of Mexico gas lines merge	1-20	30
Phillips, Seaway slate Midwest products line	2-17	28
Ecuador calls tender for new crude oil pipeline	2-17	32
ANR, Transco propose eastern U.S. gas line	3-3	30
Infrastructure of Cotton Valley expanding with exploration and development action	3-10	34
Great Lakes schedules major system expansion	3-31	38
Argentina's TGN changes to increase supply, ensure delivery—Ricardo Markous and Pablo Pettinaroli	3-31	73
Cotton Valley reef pipeline, E&D expand	4-7	33
Study identifies upgrade scenarios for Slovak gas system—Ján Rajzinger, Andreas Dercz, Frank-Ulrich Müller, and Rolf Zeppenfeld	4-7	71
Columbia slates gas pipeline to Northeast U.S.	4-14	28
Tennessee Gas joins U.S. Northeast gas pipeline fray	4-14	28
Canadian liquids pipelines mark progress	4-21	28
Texaco plans Louisiana NGL system expansion	4-28	38
AFRICA REPORT. Key decisions near for Chad pipeline proposal—Patrick Crow	5-12	54
TransCanada slates major system expansion	5-19	39
Caspian pipeline partners sign project accord	5-26	32
Texaco slates gulf-Midcontinent pipeline	6-30	34
Big Canadian miscible CO_2 EOR project, pipeline advance	7-7	23
Poseidon pipeline expands in Gulf of Mexico	7-14	23
Two Canadian gas pipelines mark progress	7-14	24
Contracts awarded for Bolivia-Brazil line	8-4	26
Gulf of Mexico sour crude-oil lines to see increase	8-18	50
Canadian natural gas export pipeline race heating up	8-25	29
Pdvsa completes study of Venezuela-Florida oil pipeline	8-25	37
Russia's Caspian line to bypass Chechnya	10-20	41
Sable gas project tied to timely pipeline nod	10-27	30
Sable Island gas pipeline project approved	11-3	28
Turkmen-Pakistani export gas pipeline marks progress	11-3	31
Coastal wins nod on Victoria pipeline	11-17	38
Canadian gas pipeline duel heating up	12-8	32
NEB fully approves Sable Island gas project	12-15	22
Pollution Control		
Pennzoil settles pipeline spill suit	3-10	31
BLM survey finds Alyeska's woes continue	4-7	32

REFINING

ANALYSIS, Methods of		
Supercritical fluid extraction reveals resid properties—Keng H. Chung, Chunming Xu, Yunxiang Hu, and Renan Wang	1-20	66
New, simpler equations calculate pressure-compensated temperatures—Jerald Linsley	3-24	58
New correlation estimates viscosity of paraffinic stocks—A. A. Abdel-Waly	6-16	61
Linear regression determines crude properties at variable boiling points—Robert E. Maples	11-3	72
Proposed European Rvp limit raises concerns	11-17	86
ASPHALT		
Shell sees niche for new bitumen products	7-21	38
CATALYSIS, CATALYSTS (Also see Cracking, Catalytic)		
California refinery meets seismic codes using new wrapping technique—Thomas T. Hwang and William C. Wehnes	3-31	70
WORLDWIDE CATALYST REPORT. Number of catalyst formulations stable in a tough market–Anne K. Rhodes	10-6	41
WORLDWIDE CATALYST REPORT. OGJ international refining-catalyst compilation—1997	10-6	43
NPRA Q&A—2: Refiners look to catalysts to improve operations	10-20	58
Catalyst improves octane at Perm refinery—Vladimir M. Shuverov, Valery A. Krylov, G. C. Anderson, N. L. Gilsdorf, M. Y. Kon, and F. Baars	11-24	49
COGENERATION		
Petrobras slates $2 billion cogeneration scheme for refineries	6-9	26
MANAGEMENT PERSPECTIVE: India's Cochin Refineries slates gasified-resid cogen plant	10-20	33

	Date	Page
COKING		
Phillips, Pdvsa ink coker, crude sale deal	9-1	40
U.S. petroleum coke production expected to increase—Edward J. Swain	11-10	79
COMPUTERS/MICROCOMPUTERS		
New, simpler equations calculate pressure-compensated temperatures—Jerald Linsley	3-24	58
Asset management installed on Mapco system	3-31	72
CONSTRUCTION		
WORLDWIDE CONSTRUCTION. Refineries—Marilyn Radler	4-14	56
WORLDWIDE CONSTRUCTION. Refineries—Marilyn Radler	10-13	57
COSTIMATING, Quarterly (by Gary Farrar)		
How refinery fuel indexes have varied	1-6	42
Indexes for selected equipment show moderate increase	4-7	78
How Nelson-Farrar indexes of chemical costs have changed	7-7	72
Changes in the indexes for nonmetallic building materials	10-6	86
COSTS		
Reliability-based approach reduces flare design relief load—J. Patrick Williams and Michael D. Donovan	12-15	47
COSTS (Nelson-Farrar Cost Indexes) by Gary Farrar		
Nelson-Farrar cost indexes	1-6	51
Nelson-Farrar cost indexes	2-3	53
Nelson-Farrar cost indexes	3-3	79
Nelson-Farrar cost indexes	4-7	77
Nelson-Farrar cost indexes	5-5	112
Nelson-Farrar cost indexes	6-2	143
Nelson-Farrar cost indexes	7-7	71
Nelson-Farrar cost indexes	8-4	67
Nelson-Farrar cost indexes	9-1	61
Nelson-Farrar cost indexes	10-6	81
Nelson-Farrar cost indexes	11-3	81
Nelson-Farrar cost indexes	12-1	60
CRACKING, Catalytic		
FCC REVAMP—1: Case studies reveal common design, equipment errors in revamps—Scott W. Golden	4-7	62
FCC REVAMP—CONCLUSION: Simple engineering changes fix product recovery problems—Scott W. Golden	4-14	47
Refiner improves FCC yields using latest process technologies—Steve J. McCarthy, Mike F. Raterman, Chris G. Smalley, Joe F. Sodomin, and Rik B. Miller	8-18	56
NPRA Q&A—1: FCC operating strategies covered at refining conference	10-13	50
Feed molecular properties explain cracking results—Bruce A. Lerner and Frank L. Himpsl	12-1	61
CRUDES		
Gravity, sulfur content of U.S. crude slate holding steady—Edward J. Swain	1-13	46
GUIDE TO WORLD CRUDES: Australia's Cossack crude oil is light and sweet—Anne K. Rhodes	5-5	113
GUIDE TO WORLD CRUDES: Welsh crude is very light and sweet—Anne K. Rhodes	5-12	71
GUIDE TO WORLD CRUDES: Assays of two Venezuelan crudes differ significantly—Anne K. Rhodes	6-9	58
NPRA Q&A—CONCLUSION: Optimizing desalter operations can help refiners cope with heavy crudes	10-27	71
Linear regression determines crude properties at variable boiling points—Robert E. Maples	11-3	72
EQUIPMENT		
Improved cleaning method removes pyrophoric iron sulfide safely—Philip A. Vella	2-24	65
Reliability-based approach reduces flare design relief load—J. Patrick Williams and Michael D. Donovan	12-15	47
FIRES, FLOODS, OTHER DISASTERS		
Hindustan refinery to restart in 2 months	10-6	34
FORECASTS, TRENDS, STATISTICS, SURVEYS		
U.S. refiners must piece together RFG, pollution control puzzle—Barbara Saunders	1-6	18
Gravity, sulfur content of U.S. crude slate holding steady—Edward J. Swain	1-13	46
Doubt looms over U.S. refining upturn	3-24	24
WORLDWIDE CONSTRUCTION. Refineries—Marilyn Radler	4-14	56
WORLDWIDE CONSTRUCTION. Sulfur—Marilyn Radler	4-14	82
Sulfur recovery in U.S. refineries is at an all-time high—Edward J. Swain	4-21	71
FOCUS: REFINING. State of European refining industry is less bleak than reported—John H. Jenkins	4-28	49
FOCUS: REFINING. Engineering firm has designed refinery of the future—Makoto Inomata, Kyohei Sato, Yu Yamada, and Hajime Sasaki	4-28	56
ASIA'S DOWNSTREAM EXPANSION. South Korea's refining/petrochemical capacity expansion push continues to gather momentum	7-7	19
ASIA'S DOWNSTREAM EXPANSION. How evolving new fuel specs are challenging Asia's refiners	7-7	35
ASIA'S DOWNSTREAM EXPANSION. Asian refiners may see relief on margins as capacity additions ease	7-7	41
ASIA'S DOWNSTREAM EXPANSION. Japan's refiner/marketers continue to grapple with downstream deregulation	7-7	51
RUSSIA REPORT. Russia struggles toward refinery modernization goals—Mikhail G. Rudin and Valeri S. Plotnikov	8-18	31
DOWNSTREAM IN THE PERSIAN GULF—1: Gulf countries continue to increase refinery capacity, complexity—Abdullah M. Aitani and Syed Halim Hamid	9-15	36
WORLDWIDE CATALYST REPORT. Number of catalyst formulations stable in a tough market–Anne K. Rhodes	10-6	41
WORLDWIDE CATALYST REPORT. OGJ international refining-catalyst compilation—1997	10-6	43
WORLDWIDE CONSTRUCTION. Refineries—Marilyn Radler	10-13	57
MANAGEMENT PERSPECTIVE: Indian refiner/marketers must adapt to changes with deregulation—Michael Wilcox	10-20	31
U.S. petroleum coke production expected to increase—Edward J. Swain	11-10	79
WORLDWIDE REFINING. Good capacity gains and restructuring highlight worldwide refining—Thi Chan	12-22	33
WORLDWIDE REFINING. Survey—Marilyn Radler	12-22	41
FUELS, Diesel		
Philippine refiner completes low-sulfur diesel upgrade—Samuel S. Candido and Elino V. Crisostomo	1-27	74
FUELS, Gasoline		
First automated refueling system on trial	6-23	27
Blend-control system all but eliminates reblends for Canada refiner—Peter J. Vermeer, Clifford C. Pedersen, William M. Canney, and John S. Ayala	7-28	74
New vehicle choices hiking U.S. fuels use	9-1	38
U.S. refiners set more records	9-22	34
Unocal wins first round of CARB RFG patents war	11-3	33
Proposed European Rvp limit raises concerns	11-17	86
FUELS, General		
Refiners match Rvp reduction measures to operating problems—Joseph Musumeci	2-3	57
REFINING REPORT. Canadian refiner finds simple route to reformulated gasoline production—J. Douglas Perkins, G. W. G. McDonald, and Brian Walsh	3-17	70
ASIA'S DOWNSTREAM EXPANSION. How evolving new fuel specs are challenging Asia's refiners	7-7	35
Depoisoning process turns used oil into valuable feed	12-8	61
FUELS, Reformulated		
PETROLEUM PRODUCTS MARKETING: California marketers face new onslaught of RFG criticism—Barbara Saunders—	6-23	47
Oxygenates seen working as intended in U.S.	8-11	31
Unocal wins first round of CARB RFG patents war	11-3	33
HYDROCRACKING		
NPRA Q&A—2: Refiners look to catalysts to improve operations	10-20	58
HYDROGEN		
FOCUS: REFINING. Advanced control of hydrogen network reduces energy consumption—Michael Mastrogiacomo, Denis Bilodeau, Steven Treiber, and John Walker	9-1	72
Agreement signed for commercial GTL plant	12-15	28
HYDROTREATING		
Low-sulfur specifications cause refiners to look at hydrotreating options—Lawrence L. Upson and Mark W. Schnaith	12-8	47
SOx control additive reduces emissions, saving capital investments—John S. Becker, Mark J. LaCour, Steven W. Davey, and John T. Haley	12-29	76
INSTRUMENTATION, Control		
Hungarian refiner to implement refinery-wide information system	5-12	64
FOCUS: REFINING. Advanced control of hydrogen network reduces energy consumption—Michael Mastrogiacomo, Denis Bilodeau, Steven Treiber, and John Walker	9-1	72
LUBE OILS		
Conoco, Pennzoil start up Louisiana lubes plant	4-21	27

	Date	Page
FOCUS: REFINING. New lubes plants use state-of-art hydrodewaxing technology—Anne K. Rhodes	9-1	63
Depoisoning process turns used oil into valuable feed	12-8	61
MAINTENANCE		
Improved cleaning method removes pyrophoric iron sulfide safely—Philip A. Vella	2-24	65
MANAGEMENT		
Refiners match Rvp reduction measures to operating problems—Joseph Musumeci	2-3	57
Process industry launches a data exchange consortium	2-10	59
ASIA'S DOWNSTREAM EXPANSION. Japan's refiner/ marketers continue to grapple with downstream deregulation.	7-7	51
MANAGING INTEGRATED OIL & GAS COMPANIES. U.S. refiners urged to capture, defend prosperity—Jim Marcum.	11-10	57
OCTANES		
Catalyst improves octane at Perm refinery—Vladimir M. Shuverov, Valery A. Krylov, G. C. Anderson, N. L. Gilsdorf, M. Y. Kon, and F. Baars	11-24	49
PLANT CLOSURES		
Hostile operating climate augurs further closures for U.S. refiners—Anne Rhodes	3-10	21
Hindustan refinery to restart in 2 months	10-6	34
PLANT CONSTRUCTION, New Refineries		
REFINING REPORT. Environmentally advanced refinery nears start-up in Germany—Anne K. Rhodes	3-17	49
Kyrgyzstan starts up its first refinery—Gordon McLeod	5-5	108
Indian refinery projects advance	12-15	25
Agreement signed for commercial GTL plant	12-15	28
PLANT EXPANSION		
PLANT EXPANSION REFINING REPORT. Dutch refinery nears completion of major renovation—Anne K. Rhodes	3-17	60
USX, Ashland slate downstream combination	5-26	27
ASIA'S DOWNSTREAM EXPANSION. South Korea's refining/ petrochemical capacity expansion push continues to gather momentum	7-7	19
DOWNSTREAM IN THE PERSIAN GULF—1: Gulf countries continue to increase refinery capacity, complexity—Abdullah M. Aitani and Syed Halim Hamid	9-15	36
PLANT PRACTICES		
REFINING REPORT. Environmentally advanced refinery nears start-up in Germany—Anne K. Rhodes	3-17	49
California refinery meets seismic codes using new wrapping technique—Thomas T. Hwang and William C. Wehnes	3-31	70
FOCUS: REFINING. Engineering firm has designed refinery of the future—Makoto Inomata, Kyohei Sato, Yu Yamada, and Hajime Sasaki	4-28	56
GAS AND POWER FROM REFINING. Despite increasing refinery power production, oil-fired generation is declining—John Paffenbarger	7-14	35
GAS AND POWER FROM REFINING. A Texas project illustrates the benefits of integrated gasification—Jack Philcox and Gary W. Fenner	7-14	41
Blend-control system all but eliminates reblends for Canada refiner—Peter J. Vermeer, Clifford C. Pedersen, William M. Canney, and John S. Ayala	7-28	74
Refiner improves steam system with custom simulation/ optimization packagae—Zoran Milosevic and Clemens Ponhöfer	8-25	90
PLANTS, General		
New calculation method alters tank emission reports—Michael E. Anderson and Jeffrey H. Siegell	11-17	77
POLLUTION CONTROL		
New U.S. ozone standards will boost NOx control market	9-8	88
POWER PLANTS		
POWER PLANTS GAS AND POWER FROM REFINING. Despite increasing refinery power production, oil-fired generation is declining—John Paffenbarger	7-14	35
GAS AND POWER FROM REFINING. A Texas project illustrates the benefits of integrated gasification—Jack Philcox and Gary W. Fenner.	7-14	41
PROCESSES		
REFINING REPORT. Dutch refinery nears completion of major renovation—Anne K. Rhodes.	3-17	60
REFINING REPORT. New technology appears to perform several processes in one step	3-17	80
Advances make gas-to-liquids process competitive for remote locations—Alan H. Singleton	8-4	68
Refiner improves FCC yields using latest process technologies—Steve J. McCarthy, Mike F. Raterman, Chris G. Smalley, Joe F. Sodomin, and Rik B. Miller	8-18	56
FOCUS: REFINING. New lubes plants use state-of-art hydrodewaxing technology—Anne K. Rhodes	9-1	63
PRODUCTS		
PRODUCTS New etherification process commercialized in Finland	1-6	44
Peña asks NPC for gas, refined products studies	12-22	26
RESEARCH		
FCC REVAMP—1: Case studies reveal common design, equipment errors in revamps—Scott W. Golden.	4-7	62
Advances make gas-to-liquids process competitive for remote locations—Alan H. Singleton	8-4	68
RESID/HEAVY OIL PROCESSING		
Supercritical fluid extraction reveals resid properties—Keng H. Chung, Chunming Xu, Yunxiang Hu, and Renan Wang	1-20	66
FOCUS: REFINING. R&D to control abnormal events reaches midpoint	9-1	75
NPRA Q&A—CONCLUSION: Optimizing desalter operations can help refiners cope with heavy crudes	10-27	71
Feed molecular properties explain cracking results—Bruce A. Lerner and Frank L. Himpsl	12-1	61
Research targets lower gas-processing operating costs—Howard S. Meyer and Dennis Leppin—	12-29	83
SAFETY		
Analysis of tank failure reveals oversight in inspection procedures—Philip E. Myers, Gregory M. Mulvany, and Ndoma Ntela	2-17	47
STORAGE		
Analysis of tank failure reveals oversight in inspection procedures—Philip E. Myers, Gregory M. Mulvany, and Ndoma Ntela	2-17	47
TANK GAUGING—1: Review of tank measurement errors reveals techniques for greater accuracy—Frank J. Berto	3-3	68
TANK GAUGING—Conclusion: Automatic gauging technologies have advanced, but better accuracy is needed—Frank J. Berto	3-10	63
New calculation method alters tank emission reports—Michael E. Anderson and Jeffrey H. Siegell	11-17	77
SULFUR (Also see Crudes; Corrosion)		
Philippine refiner completes low-sulfur diesel upgrade—Samuel S. Candido and Elino V. Crisostomo	1-27	74
WORLDWIDE CONSTRUCTION. Sulfur—Marilyn Radler	4-14	82
Sulfur recovery in U.S. refineries is at an all-time high—Edward J. Swain	4-21	71
WORLDWIDE GAS PROCESSING. World sulfur production—Marilyn Radler	6-2	135
WORLDWIDE CONSTRUCTION. Sulfur—Marilyn Radler	10-13	79
Low-sulfur specifications cause refiners to look at hydrotreating options—Lawrence L. Upson and Mark W. Schnaith	12-8	47
SOx control additive reduces emissions, saving capital investments—John S. Becker, Mark J. LaCour, Steven W. Davey, and John T. Haley	12-29	76
WASTE DISPOSAL		
Closed-loop hydrocarbon recovery system meets waste water regulations	8-11	70
WATER		
Closed-loop hydrocarbon recovery system meets waste water regulations	8-11	70
Refiner improves steam system with custom simulation/ optimization packagae—Zoran Milosevic and Clemens Ponhöfer	8-25	90
WAXES		
WAXES New correlation estimates viscosity of paraffinic stocks—A. A. Abdel-Waly	6-16	61
FOCUS: REFINING. New lubes plants use state-of-art hydrodewaxing technology—Anne K. Rhodes	9-1	63

PETROCHEMICAL

ANALYSIS
New, simpler equations calculate pressure-compensated temperatures—Jerald Linsley . . . 3-24 58

COSTS
ETHYLENE TECHNOLOGIES—Conclusion: New ethylene routes are available, but economics inhibit their use—Marcello Picciotti . . . 6-30 71

ETHYLENE
PETROCHEMICAL REPORT. World ethylene capacity jumped 5 million mt/y or 6.5% in past year—Anne K. Rhodes . . . 5-19 45
ETHYLENE TECHNOLOGIES—1: Novel ethylene technologies developing, but steam cracking remains king—Marcello Picciotti . . . 6-23 53
ETHYLENE TECHNOLOGIES—Conclusion: New ethylene routes are available, but economics inhibit their use—Marcello Picciotti . . . 6-30 71

FEEDSTOCKS
DOWNSTREAM IN THE PERSIAN GULF—Conclusion: To diversify its petrochemicals portfolio, GCC needs liquid feeds—Abdullah M. Aitani and Syed Halim Hamid . . . 9-29 96

FORECASTS, TRENDS, STATISTICS, SURVEYS
Volatility to rule olefins, styrene markets to 2001 . . . 3-17 39
WORLDWIDE CONSTRUCTION. Petrochemicals—Marilyn Radler . . . 4-14 67
PETROCHEMICAL REPORT. World ethylene capacity jumped 5 million mt/y or 6.5% in past year—Anne K. Rhodes . . . 5-19 45
PETROCHEMICAL REPORT. Petrochemical producers gain advantage with novel business strategies—Tad Glauthier, Harold Kalkstein, and Robert Williamson . . . 5-19 54
PETROCHEMICAL REPORT. International survey of ethylene f rom steam crackers—1997 . . . 5-19 59
ASIA'S DOWNSTREAM EXPANSION. Chem Systems outlook for Asian petrochemicals . . . 7-7 46
Global petrochemical markets to get tougher . . . 8-11 28
WORLDWIDE CONSTRUCTION. Petrochemicals—Marilyn Radler . . . 10-13 67

MANAGEMENT
PETROCHEMICAL REPORT. Petrochemical producers gain advantage with novel business strategies—Tad Glauthier, Harold Kalkstein, and Robert Williamson . . . 5-19 54

METHANOL
DOWNSTREAM IN THE PERSIAN GULF—2: The Persian Gulf's petrochemical industry is proliferating—Abdullah M. Aitani and Syed Halim Hamid . . . 9-22 73
Iraq reluctantly accepts renewed U.N. deal . . . 12-15 21

PLANTS
Petrochemical capacity expansions abound . . . 2-24 40
WORLDWIDE CONSTRUCTION. Petrochemicals—Marilyn Radler . . . 4-14 67
Thailand's petrochemical demand grows; two plants proposed . . . 7-21 34
W. Australia eyeing petrochemical complex . . . 8-4 32
OGJ SPOTLIGHT: BP slates world-scale expansions at its Grangemouth complex—David Knott . . . 8-18 15
Petrochemical deals mark European shakeout . . . 9-29 50
WORLDWIDE CONSTRUCTION. Petrochemicals—Marilyn Radler . . . 10-13 67
Dow, Shell plan Aussie petchem plant . . . 10-20 34

POLLUTION CONTROL
MTBE faces a new round of political skirmishes in the U.S.—Barbara Saunders . . . 3-31 22

PROCESSES
New etherification process commercialized in Finland . . . 1-6 44

PRODUCTS
Ethylene consumption seen doubling by 2015 . . . 1-13 31
ASIA'S DOWNSTREAM EXPANSION. South Korea's refining/petrochemical capacity expansion push continues to gather momentum . . . 7-7 19
OGJ SPOTLIGHT: BP cracks polymer recycling technique at Grangemouth . . . 8-18 18
BP to expand olefins capacity in Southeast Asia . . . 9-15 27
DOWNSTREAM IN THE PERSIAN GULF—2: The Persian Gulf's petrochemical industry is proliferating—Abdullah M. Aitani and Syed Halim Hamid . . . 9-22 73

INTERNATIONAL

ABU DHABI
Abu Dhabi plant on track for major expansion . . . 2-17 52
Petrochemical capacity expansions abound . . . 2-24 40
THE CHANGING ENERGY MIX. Gas receives new priority in Abu Dhabi's onshore work—Bob Tippee . . . 8-11 51

AFRICA (General)
Ivory Coast, Ghana gas, power projects advance . . . 3-17 111
Synthetic fuels aiding South Africa to advance its world energy role—David Knott . . . 3-17 23
Soekor nears completion of S. Africa's first oil field development . . . 3-17 26
OFFSHORE PETROLEUM OPERATIONS. Cold-forged connector ties back well risers in Congo field—William M. Taylor, Marc Tison, and Andre Bahoumina . . . 5-5 90
AFRICA REPORT. Interest grows in African oil and gas opportunities—David Knott . . . 5-12 41
AFRICA REPORT. Legal improvements brighten North Africa production outlook . . . 5-12 48
AFRICA REPORT. Africa gaining importance in world LPG trade—Rick R. Haun, Ken W. Otto, and S. Craig Whitley . . . 5-12 56
Phillips group exploring off South Africa . . . 5-19 36
Subsalt exploration interest spreading outside Gulf of Mexico . . . 7-14 22
W. Africa success spurs UMC to hike outlays . . . 7-14 30
Computer model designs African multiproducts line extension—Janusz Stuchly and Chris Kedge . . . 7-14 47
Potential outlined in Southern Outeniqua basin off S. Africa—Jacques Roux . . . 7-21 87
Sub-Saharan Africa energy future brightening—John L. Kennedy . . . 7-28 31
Exploration plans flourish in Mozambique . . . 9-8 34
SOUTH AFRICA OFFSHORE E&P—1: Exploration to first production on Block 9 off South Africa—Paul L. A. Burden and Christopher P. N. Davies . . . 9-8 92
SOUTH AFRICA OFFSHORE E&P—2: Oribi field is South Africa's first offshore crude oil production—Paul L. A. Burden and Christopher P. N. Davies . . . 9-15 63
Interference tests verify reservoir continuity, offshore Africa Neil Humphreys, Larry Myers, Arlene G. Pollin, Steve Hill, and Ian Treherne . . . 11-3 75

ALGERIA
Anadarko logs more Algeria discoveries . . . 1-27 31
BP, Sonatrach land Algerian gas pact . . . 5-5 58
AFRICA REPORT. Interest grows in African oil and gas opportunities—David Knott . . . 5-12 41
AFRICA REPORT. Legal improvements brighten North Africa production outlook . . . 5-12 48
BHP wins Algerian license after oil strike . . . 6-16 31

ANGOLA
AFRICA REPORT. Interest grows in African oil and gas opportunities—David Knott . . . 5-12 41
Wood Mackenzie: Angola the new hot spot . . . 12-1 41

ARGENTINA
Repsol, Pluspetrol eye Latin American accord . . . 2-3 35
Argentina's TGN changes to increase supply, ensure delivery—Ricardo Markous and Pablo Pettinaroli . . . 3-31 73
GasAndes will flow by midyear—Warren R. True . . . 4-21 61
Argentina-Brazil NGL deal signed . . . 4-21 32
Argentine gas plant expansion makes most of existing infrastructure—Kevin Kernan and Daniel Carranza . . . 5-26 64
Argentine plant increases capacity, improves NGL recoveries—Joe T. Lynch and César L. Fernández . . . 10-6 74
Unusual leg positioning highlights jack up move to Argentina . . . 10-20 37

ASIA (General)
Asia's product imports at a low . . . 3-17 30
ASIA'S DOWNSTREAM EXPANSION. South Korea's refining/petrochemical capacity expansion push continues to gather momentum . . . 7-7 19
ASIA'S DOWNSTREAM EXPANSION. How evolving new fuel specs are challenging Asia's refiners . . . 7-7 35
ASIA'S DOWNSTREAM EXPANSION. Asian refiners may see relief on margins as capacity additions ease . . . 7-7 41
ASIA'S DOWNSTREAM EXPANSION. Chem Systems outlook for Asian petrochemicals . . . 7-7 46
ASIA'S DOWNSTREAM EXPANSION. Japan's refiner/marketers continue to grapple with downstream deregulation . . . 7-7 51
RUSSIA REPORT. Pipeline gas trade between Asian Russia, Northeast Asia gets fresh look—Keun-Wook Paik and Jae-Yong Choi . . . 8-18 41

	Date	Page
Cornering Asia's "sub-LNG" gas	9-8	37
Unocal plans major gas grid in South Asia	12-15	24
FOCUS: EXPLORATION. Petroleum systems, resources of Southeast Asia, Australasia—Jim Howes	12-15	52
AUSTRALIA		
SW Queensland pipeline starts up	1-20	28
Australia's southeastern Bonaparte basin has plenty of potential—Shige Miyazaki	4-21	78
GUIDE TO WORLD CRUDES: Australia's Cossack crude oil is light and sweet—Anne K. Rhodes	5-5	113
New LNG scheme eyed for northern Australia	5-26	29
Exploration mounts off Western Australia	6-30	37
W. Australia eyeing petrochemical complex	8-4	32
Santos groups build Cooper/Eromanga gas reserves	9-1	81
Gas to pace Aussie energy demand growth	9-22	29
Dow, Shell plan Aussie petchem plant	10-20	34
Coastal wins nod on Victoria pipeline	11-17	38
Santos adds gas discoveries in Australia	11-24	89
FOCUS: EXPLORATION. Petroleum systems, resources of Southeast Asia, Australasia—Jim Howes	12-15	52
Large field increases Queensland gas supply	12-15	70
AUSTRALIA (Offshore)		
Giant production barge slated for Timor Sea	1-20	28
Exploration sizzles off W. Australia	5-26	28
Potential seen in areas off Northwest, Southeast Australia—Paul E. Williamson	11-24	84
AZERBAIJAN		
Azerbaijan's Caspian exploration heating	1-20	31
OFFSHORE PETROLEUM OPERATIONS. Caspian Sea MODU refurbished to western standards—Paul K. Prince and Dennis E. Yenzer	5-5	65
Georgia awards PSC with downstream aspects	7-14	29
CENTRAL ASIAN FSU. Caspian reserves luring operators—Frank C. Alexander Jr.	7-21	23
CENTRAL ASIAN FSU. How oil, gas investment prospects compare for Azerbaijan, Kazakhstan—Richard R. Dion	7-28	25
CENTRAL ASIAN FSU. Turkmenistan emerging as key player in central Asian FSU	7-28	26
CENTRAL ASIAN FSU. Tengiz experience example of oil revitalization advancing in FSU—Richard H. Matzke	8-4	20
CENTRAL ASIAN FSU. U.S. Caspian area foreign policy in conflict with resource plans—John H. Lichtblau	8-11	19
CENTRAL ASIAN FSU. Azerbaijan's Aliyev pursuing fine political balance in advancing Caspian affairs globally—Richard Wheatley	8-11	22
CENTRAL ASIAN FSU. COMMENT: Caspian Sea projects advancing after Aliyev state visit to Washington	8-11	24
AIOC lets contract for full Caspian development work	8-25	42
COMMENT: U.S. sanctions against oil giants at odds with its Caspian policy—Manouchehr Takin	10-13	27
COMMENT: Trans-Caucasus transport agreement is needed to solve Caspian problem—M. G. Melconian	10-13	28
Azerbaijan seeks help to redevelop fields	10-20	38
BAHRAIN		
DOWNSTREAM IN THE PERSIAN GULF—1: Gulf countries continue to increase refinery capacity, complexity—Abdullah M. Aitani and Syed Halim Hamid	9-15	36
DOWNSTREAM IN THE PERSIAN GULF—2: The Persian Gulf's petrochemical industry is proliferating—Abdullah M. Aitani and Syed Halim Hamid	9-22	73
DOWNSTREAM IN THE PERSIAN GULF—Conclusion: To diversify its petrochemicals portfolio, GCC needs liquid feeds—Abdullah M. Aitani and Syed Halim Hamid	9-29	96
BANGLADESH		
UMC signs PSC for large block in Bangladesh	3-17	34
Shell/Cairn deal to step up Bangladesh E&D	5-12	32
Governments eye gas incentives	7-14	30
Bangladesh is buzzing—David Knott	7-14	31
BARENTS SEA		
Norway allocates big Barents Sea licenses	5-26	28
Subsalt exploration interest spreading outside Gulf of Mexico	7-14	22
Russian Barents Sea licensing on tap	7-28	41
Huge potential seen in Europe's offshore frontiers	9-15	26
BELGIUM		
WORLD PIPELINE CONSTRUCTION. Distrigaz slates project spending tied to Interconnector	2-10	40
Interconnector to cut gas prices, contracts—	6-2	38
BLACK SEA		
U.K.'s MMS ready to drill off Bulgaria—David Knott	11-3	31
BOLIVIA		
BOLIVIA EXPLORATION—1: World class Devonian potential seen in eastern Madre de Dios basin—Ken E. Peters, John B. Wagner, Daniel G. Carpenter, and Keith T. Conrad	2-17	61
BOLIVIA EXPLORATION—2: Eastern Madre de Dios Devonian generated large volumes of oil—Ken E. Peters, John B. Wagner, Daniel G. Carpenter, and Keith T. Conrad	2-24	61
Contracts awarded for Bolivia-Brazil line	8-4	26
BRAZIL		
Argentina-Brazil NGL deal signed	4-21	32
Petrobras slates $2 billion cogeneration scheme for refineries	6-9	26
Brazil's Senate approves new petroleum investment law	7-28	37
Brazilian deals mark gas/power convergence	7-28	37
Contracts awarded for Bolivia-Brazil line	8-4	26
Brazil's petroleum deregulation law signed	8-18	20
BRAZIL (Offshore)		
Deepwater success spurs leasing competition	3-24	32
Deepwater record expected off Brazil in June	6-9	26
Brazil marks more offshore exploration and development progress	7-28	38
PRODUCTION REPORT. Water depth production record set off Brazil—Pedro J. Barusco F., Ricardo Juiniti, and Marcos G. G. Morais	9-29	59
BRUNEI		
Geology of Brunei deltas, exploration status updated—Jan Schreurs	8-4	76
BULGARIA		
U.K.'s MMS ready to drill off Bulgaria—David Knott	11-3	31
CANADA		
NEB unveils pipeline SCC study results	1-6	25
FORECAST AND REVIEW: Revenue surge to sustain drilling in U.S. and Canada—Robert J. Beck and G. Alan Petzet	1-27	66
Canada supplies U.S. record 2.8 tcf of gas in 1995	2-3	24
Canadian industry indicators up in 1996	2-3	35
Petrochemical capacity expansions abound	2-24	40
New regs seen altering gas buyersv habits	2-24	40
NEB fields bids for 1 tcf of Canadian gas	3-10	28
CAVERN GAS STORAGE—1: Downhole probes evaluate cavern integrity—N. Graeme Crossley	3-3	74
CAVERN GAS STORAGE—Conclusion: Site tests validate benefits of cavern probes—N. Graeme Crossley	3-10	69
REFINING REPORT. Canadian refiner finds simple route to reformulated gasoline production—J. Douglas Perkins, G. W. G. McDonald, and Brian Walsh	3-17	70
TransCanada group gets Mexican pipeline nod	3-31	38
Largest North American LNG complex on tap	4-14	26
North American gas firms chase partnerships to boost marketing—Barbara Saunders	4-21	19
Canadian liquids pipelines mark progress	4-21	28
Chauvco acquires three Gabon blocks	5-5	60
Hibernia will emphasize electronic documentation—Tor Stavnes and Alan C. Kearley	5-5	115
Multivariable control benefits Alberta plant—Kevin Collins, Steven Treiber, and John Walker	5-5	118
Canadian firms pressing Oman exploration	5-12	32
Cabre wins three Morocco permits	5-12	35
TransCanada slates major system expansion	5-19	39
GEOCHEMICAL EXPLORATION—1: Results of magnetic GHI and radiometric surveys in W. Canada—Leonard A. LeSchack	5-19	84
Horizontal drilling, 3D seismic driving Williston resurgence—Richard Wheatley	5-26	18
Canadian portion of the Williston basin humming with work	5-26	22
GEOCHEMICAL EXPLORATION—2: Magnetic HGI, radiometric surveys prove cost-effective in W. Canada—Leonard A. LeSchack	5-26	82
NGSA: Flawed power restructuring could crimp gas demand	6-2	42
North American gas supply, demand changing	6-9	21
U.S. oil and gas finding, development costs dropping	6-9	22
Canada's petroleum output set records in 1996	6-9	24
Investment incentives driving Canadian oilsands activity	6-9	25
Big Canadian miscible CO_2 EOR project, pipeline advance	7-7	23
LNG scheme proposed in British Columbia	7-7	26
Two Canadian gas pipelines mark progress	7-14	24
Calgary firm slates Siberian drilling	7-14	29
Canadian gas gaining U.S. market share	7-21	30
Suncor slates massive oilsands expansion	8-11	32
TransCanada plans complicate Canada gas line picture	8-18	27
Mannville gas reentry lights western Canada—G. Alan Petzet	8-18	72
Canadian natural gas export pipeline race heating up	8-25	29
Canadian plant ups C3 recovery without more dehydration—C. James Bell and Yuv R. Mehra	9-29	86

	Date	Page
Canada's oilsands activity percolating	10-13	40
CanOxy acquires Libyan farmout from Bula	10-20	40
Sable gas project tied to timely pipeline nod	10-27	30
Canada, U.S. M&A action at blistering pace	10-27	36
PIPELINE REPORT. Canadian crude terminal resolves tank-odor problems—Robert Wrubleski, Gordon Ferg, Daryl Perrin, Dayle Chadbourne, and David Picard	10-27	50
More operators set sights on western Newfoundland—Alphonsus Fagan	10-27	78
Syncrude gets nod for Aurora oilsands plan	11-3	28
Sable Island gas pipeline project approved	11-3	28
Canada's Hibernia oil field on stream at last	11-24	42
Syncrude gets nod for Aurora oilsands plan	11-3	28
More projects join Canada's oilsands fray	12-8	22
Canadian gas pipeline duel heating up	12-8	32
Drilling round starts in western Newfoundland	12-8	72
NEB fully approves Sable Island gas project	12-15	22
Where future Canadian gas supply will originate—Robert A. Meneley	12-15	67
CANADA (Offshore)		
More E&D seen off Canada's eastern coast	5-19	30
Hibernia concrete drilling-production platform starts tow-out	6-2	32
Towout successful, installation begins on Hibernia platform	6-16	29
Scimitar slates two Mozambique wildcats	6-16	32
Canadian panel eyeing Georges Bank leasing	7-28	41
CASPIAN SEA		
OFFSHORE PETROLEUM OPERATIONS. Caspian Sea MODU refurbished to western standards—Paul K. Prince and Dennis E. Yenzer	5-5	65
Union Texas, Oman oil form exploration, development joint venture in Kazakhstan	5-26	88
CENTRAL ASIAN FSU. Caspian reserves luring operators—Frank C. Alexander Jr.	7-21	23
CENTRAL ASIAN FSU. U.S. Caspian area foreign policy in conflict with resource plans—John H. Lichtblau	8-11	19
CENTRAL ASIAN FSU. Azerbaijan's Aliyev pursuing fine political balance in advancing Caspian affairs globally—Richard Wheatley	8-11	22
CENTRAL ASIAN FSU. COMMENT: Caspian Sea projects advancing after Aliyev state visit to Washington	8-11	24
AIOC lets contract for full Caspian development work	8-25	42
Caspian dispute—Patrick Crow	9-8	33
Turkmenistan details Caspian license round	9-29	39
COMMENT: U.S. sanctions against oil giants at odds with its Caspian policy—Manouchehr Takin	10-13	27
COMMENT: Trans-Caucasus transport agreement is needed to solve Caspian problem—M. G. Melconian	10-13	28
Russia's Caspian line to bypass Chechnya	10-20	41
Caspian questions—Patrick Crow	11-3	33
Dagestan offers Caspian exploration blocks	12-29	29
CHAD		
AFRICA REPORT. Key decisions near for Chad pipeline proposal—Patrick Crow	5-12	54
CHILE		
HOW ARE STRATEGIC ALLIANCES WORKING— Partners assume risks, lower finance costs of delayed coker-cogeneration project in Chile—Enrique Davila Alveal and Martin J. Karpenski	3-31	55
Exploration in Chile poised to advance	4-7	39
GasAndes will flow by midyear—Warren R. True	4-21	61
CHINA		
Phillips undertakes coalbed methane, petrochemical projects in China	1-20	31
China drilling slipped in '95	1-27	97
ASIA's DOWNSTREAM EXPANSION. Asian refiners may see relief on margins as capacity additions ease	7-7	41
Safety in China	8-25	42
Enron awarded new onshore PSC in China	8-25	44
China's deregulation, expansion not enough to restore market balance—Haijiang Henry Wang	9-29	33
China's new petroleum structure continues to evolve under reform	10-6	23
COMMENT: Should Kazakhstan go east—Richard R. Dion	10-6	24
Phillips finds oil in Bohai Bay	11-17	30
CHINA (Offshore)		
Santa Fe gets South China Sea, Beibu tracts	2-10	65
Man-made island exploits shallow water offshore China—Lu Jichen	7-14	65
South China Sea reservoir prompts extended reach record—Kelly Talkington	11-10	67
COLOMBIA		
SOUTH AMERICA REPORT. Foreign petroleum companies developing new paradigm for operating in the rain forest region—Bob Williams	4-21	37
ENERGY COMPANY SECURITY. Oxy claims Guerrilla threats behind local tribe's opposition to its Colombian exploration project	6-9	36
ENERGY COMPANY SECURITY. Managing energy company security risks in Latin America—Justine Barrett	6-9	44
Line extension part of Colombian production surge—John Skalski	7-28	67
Ocensa's pumps key to meeting production goals	7-28	71
Attacks halt Cano Limon production	7-28	36
Colombia's prospects	12-22	26
CONGO		
OFFSHORE PETROLEUM OPERATIONS. Cold-forged connector ties back well risers in Congo field—William M. Taylor, Marc Tison, and Andre Bahoumina	5-5	90
COSTA RICA		
Costa Rican data synthesis indicates oil, gas potential—Jaime Barrientos, Giovanni Bottazzi, Alberto Fernández, and Guillermo Barboza	5-12	76
CÔTE D'IVOIRE		
Ivory Coast, Ghana gas, power projects advance	3-17	111
Sales eyed for field off Côte d'Ivoire	5-12	32
W. Africa success spurs UMC to hike outlays	7-14	30
CZECH REPUBLIC		
Czech crude-oil terminal is in operation—Bretislav Karasek and Miroslav Cibulka	2-3	54
Czech crude-oil supplies diversified by new pipeline—Bretislav Kar—sek and Miroslav Cibulka	8-25	84
ECUADOR		
Ecuador calls tender for new crude oil pipeline	2-17	32
SOUTH AMERICA REPORT. Foreign petroleum companies developing new paradigm for operating in the rain forest region—Bob Williams	4-21	37
SOUTH AMERICA REPORT. Oxy's strategy on environment, community issues key to success of project in Ecuador's rain forest—Bob Williams	4-21	44
SOUTH AMERICA REPORT. Managing nontechnical risks associated with seismic operations in the tropical rain forests of Ecuador—Gary Barker, Gordon R. Smith, Francisco J. Vacas, Evan K. Swingholm, Richard M. Yuill, and Miguel A. Aleman	4-21	50
MANAGEMENT PERSPECTIVE: Lessons for Conoco's experiences in Ecuador's rain forest—Robert Wasserstrom and Susan Reider	8-18	24
EGYPT		
Big gas supply deal underpins Egyptian E&D	1-13	27
Egypt offers six exploration blocks for bid	2-3	30
Apache sharply expands western Egypt acreage position	2-10	63
Amoco: Nile Delta world class gas play	2-24	37
AFRICA REPORT. Legal improvements brighten North Africa production outlook	5-12	48
Egyptian LNG project marks progress	6-2	44
Egypt eyeing Mediterranean gas export	6-23	21
Egypt eastern desert exploration turns up oil—G. Alan Petzet	6-30	83
Seagull to develop Egyptian fields	7-7	30
New friction factor derived from study of Egyptian gas-field pipeline—N. El-Emam, F. K. Gad, A. Safwat Nafey, and N. Zoghaib	11-10	72
Amoco, BG to develop Nile Delta gas	11-17	32
Price a hurdle for Egyptian gas exports	12-22	28
ETHIOPIA		
Ethiopia hopes to develop Calub gas, condensate	3-24	72
EQUATORIAL GUINEA		
W. Africa success spurs UMC to hike outlays	7-14	30
ERITREA		
Anadarko to probe Eritrea subsalt	10-6	35
EUROPE (General)		
NW Europe oil flow to hit record in 1997	1-27	32
Oil export routes set for NW Europe fields	1-27	34
WORLD PIPELINE CONSTRUCTION. Gazprom and Neste plan North European gas pipeline	2-10	38
WoodMac: 1996 tops 1995 for NW Europe	2-24	35
WoodMac: NW Europe operatorsv drilling plans for 1997	2-24	35

	Date	Page
Offshore Northwest Europe development activity simmering	4-7	37
FOCUS: REFINING. State of European refining industry is less bleak than reported—John H. Jenkins	4-28	49
AFRICA REPORT. Interest grows in African oil and gas opportunities—David Knott	5-12	41
European pipeline spills down in 1995	5-19	72
PETROLEUM PRODUCTS MARKETING. European retailers scramble for market share in former Communist bloc—David Knott	6-23	35
EC to fund studies of Europe's energy grids	8-4	29
OFFSHORE NORTHERN EUROPE. Northwest Europe's operators show creativity in new developments—David Knott	8-25	49
OFFSHORE NORTHERN EUROPE. Aker develops new floating production concept for small fields	8-25	65
OFFSHORE NORTHERN EUROPE. World's first subsea separation and injection plant destined for Troll C—David Knott	8-25	66
OFFSHORE NORTHERN EUROPE. Norway develops free-swimming survey submersible	8-25	70
OFFSHORE NORTHERN EUROPE. Extended well testing boosts prospects for development of marginal fields—Tom Lesson	8-25	72
OFFSHORE NORTHERN EUROPE. World's largest gas floater under construction in Norway	8-25	82
Huge potential seen in Europe's offshore frontiers	9-15	26
Sonatrach: Europe most dynamic gas market	9-15	28
OGJ SPOTLIGHT. Elf aims to be major player in Europe's deregulated gas market	9-22	23
Petrochemical deals mark European shakeout	9-29	50
Total's Iran deal sparks row with U.S.	10-6	31
France role as European gas transit growing	10-6	32
Gas developments highlight NW Europe action	10-13	36
U.K. record well tops NW Europe action	11-17	31
Proposed European Rvp limit raises concerns	11-17	86
EC to boost CHP schemes to cut greenhouse gas emissions	12-1	34
Foinaven start tops NW Europe action	12-8	21
EU agrees to diluted gas directive	12-15	22
FINLAND		
New etherification process commercialized in Finland	1-6	44
WORLD PIPELINE CONSTRUCTION. Gazprom and Neste plan North European gas pipeline	2-10	38
Russian Barents Sea licensing on tap	7-28	41
Finland presses merger of state energy firms	10-13	35
Finland details state energy firms' merger	12-29	23
FRANCE		
French refiners to slash spending to 2000	2-17	24
Shell France first French refiner in 12 years to cut capacity	2-17	26
Esso Rep targets Aquitaine basin prospects	6-16	73
France role as European gas transit growing	10-6	32
GABON		
Engen unit signs major E&P deal with Gabon	2-3	31
Chauvco acquires three Gabon blocks	5-5	60
Ultradeepwater exploration slated off Gabon	6-23	25
GEORGIA		
Georgia awards PSC with downstream aspects	7-14	29
GERMANY		
BP to supply gas to Germany, Statoil to Ireland	2-10	26
REFINING REPORT. Environmentally advanced refinery nears start-up in Germany—Anne K. Rhodes	3-17	49
IEA sounds alarm about strategic reserves sales	7-28	35
Wingas starts work on Yamal gas link	8-25	36
German-led group to develop Kazakh oil field	9-15	32
FOCUS: DRILLING. North German operator uses learning curve to improve horizontal drilling techniques—Juergen Schamp	12-1	69
GHANA		
Ivory Coast, Ghana gas, power projects advance	3-17	111
Pacts to boost exploration off Ghana	4-7	38
GUATEMALA		
Guatemala accelerates efforts to attract foreign E&D capital	1-20	77
HUNGARY		
Hungarian refiner to implement refinery-wide information system	5-12	64
Improved gas lift proposed for Hungarian field—Gabor Takacs and Zoltan Turzo	7-7	57
INDIA		
India sweetens exploration terms	4-7	39
Enron presses development work off India	4-14	25
India's oil supply deficit spurs reforms to lure foreign capital—Mohan Malhotra	6-2	25
India defers action on petroleum product price hikes	6-2	27
India advancing LNG for power generation initiative	7-7	26
FOCUS: PRODUCTION. Platforms will handle sour streams offshore India	7-21	81
India quietly joins gas-to-liquids race—David Knott	7-21	36
Japanese firms join BG in India LNG scheme	8-11	32
Indian politics—Patrick Crow	8-18	21
India's oil subsidies	9-8	21
India attracting foreign firms with LNG deals	9-8	37
Gas hydrates to boost India's gas resource	9-15	28
Hindustan refinery to restart in 2 months	10-6	34
MANAGEMENT PERSPECTIVE: Indian refiner/marketers must adapt to changes with deregulation—Michael Wilcox	10-20	31
MANAGEMENT PERSPECTIVE: India's Cochin Refineries slates gasified-resid cogen plant	10-20	33
MANAGEMENT PERSPECTIVE: Incentives needed to expand India's oil transportation infrastructure—Mohan Malhotra	10-27	27
Two Indian LNG projects approved	12-8	23
Lawyer and giant JV see India's allure—David Knott	12-8	23
Indian refinery projects advance	12-15	25
INDONESIA		
Triton to settle SEC's Indonesia bribery charges	3-10	27
Premier slates gas development off Indonesia	5-12	31
Governments eye gas incentives	7-14	30
ARCO confirms giant Indonesian gas strike	9-15	30
Maxus sells power from Indonesian floater	11-24	36
Santos expands Indonesian holdings	12-22	27
IRAN		
Iran invites new bids for Balal field development	8-4	31
Total's Iran deal sparks row with U.S.	10-6	31
COMMENT: U.S. sanctions against oil giants at odds with its Caspian policy—Manouchehr Takin	10-13	27
COMMENT: Trans-Caucasus transport agreement is needed to solve Caspian problem—M. G. melconian	10-13	28
CanOxy acquires Libyan farmout from Bula	10-20	40
Gazprom and Iran—Patrick Crow	11-10	42
The U.S. and Iran	12-22	15
IRAQ		
Iraq and Turkey plan gas export pipeline	1-20	30
Iraqi crude oil exports swell OPEC production volume	2-24	34
Iraqi oil exports swell OPEC output	3-31	30
Iraq building E&D project list for post-U.N. sanctions period—David Knott	4-14	19
Continuing U.S.-Iraq acrimony ensures sanctions will linger—David Knott	4-14	22
COMMENT: U.S. sanctions against oil giants at odds with its Caspian policy—Manouchehr Takin	10-13	27
COMMENT: Trans-Caucasus transport agreement is needed to solve Caspian problem—M. G. Melconian	10-13	28
Decontrol in India	11-24	45
Iraq reluctantly accepts renewed U.N. deal	12-15	21
IRELAND		
BP to supply gas to Germany, Statoil to Ireland	2-10	26
Interest strong for Ireland's Rockall Trough licensing	4-14	30
Statoil slates first oil field development off Ireland	5-12	30
Ireland awards Rockall Trough licenses	6-16	32
Ireland offers oil discovery, frontier blocks for bidding	10-13	37
CanOxy acquires Libyan farmout from Bula	10-20	40
WoodMac: Irelandis Atlantic Margin frontier promises success	11-17	31
ISRAEL		
The integrated radiation environment at well sites—an adjunct to petroleum exploration—Frederic R. Siegel, Reuven Chen, J. Eduardo Vaz, and V. K. Mathur	10-6	91
ITALY		
Norway secures first gas sales contract with Italy	2-24	38
FOCUS: PIPELINES. New versions of gas turbine being shipped	9-15	60
Exploration, development prospects brighten in Italy	12-15	26
JAPAN		
FOCUS: REFINING. Engineering firm has designed refinery of the future—Makoto Inomata, Kyohei Sato, Yu Yamada, and Hajime Sasaki	4-28	56
ASIA's DOWNSTREAM EXPANSION. Japan's refiner/marketers continue to grapple with downstream deregulation	7-7	51
Cleanup continues on downgraded Japan spill	7-14	25
BP unveils Japanese pilot retail scheme	8-4	32
Japanese firms join BG in India LNG scheme	8-11	32

	Date	Page
Japanese firms eye Alaskan LNG project stake	9-29	50
More upheaval seen in Japan's retail sector	10-13	40
Japanese, South Korean yards get 10 tanker orders	11-17	40
First Kyoto, now reality	12-15	15
Kyoto conference yields treaty U.S. Congress likely to reject	12-15	17
U.S., Japan, Norway to study long-term CO_2 disposal options	12-15	18
Kyoto aftermath: Big battles still ahead as U.S. holds treaty key	12-22	17
JORDAN		
California's Benton seeks PSA in Jordan	8-18	29
KAZAKHSTAN		
Kyrgyzstan starts up its first refinery—Gordon McLeod	5-5	108
Caspian pipeline partners sign project accord	5-26	32
Union Texas, Oman oil form exploration, development joint venture in Kazakhstan	5-26	88
CENTRAL ASIAN FSU. Caspian reserves luring operators—Frank C. Alexander Jr.	7-21	23
CENTRAL ASIAN FSU. How oil, gas investment prospects compare for Azerbaijan, Kazakhstan—Richard R. Dion	7-28	25
CENTRAL ASIAN FSU. Turkmenistan emerging as key player in central Asian FSU	7-28	26
CENTRAL ASIAN FSU. Tengiz experience example of oil revitalization advancing in FSU—Richard H. Matzke	8-4	20
CENTRAL ASIAN FSU. COMMENT: Caspian Sea projects advancing after Aliyev state visit to Washington	8-11	24
German-led group to develop Kazakh oil field	9-15	32
COMMENT: Should Kazakhstan go east—Richard R. Dion	10-6	24
FSU megadeal action suddenly heating up—David Knott	11-24	42
KENYA		
Computer model designs African multiproducts line extension—Janusz Stuchly and Chris Kedge	7-14	47
KIRGIZSTAN		
BG/Agip to sell Texaco stake in Karachaganak	8-25	42
KUWAIT		
DOWNSTREAM IN THE PERSIAN GULF—1: Gulf countries continue to increase refinery capacity, complexity—Abdullah M. Aitani and Syed Halim Hamid	9-15	36
DOWNSTREAM IN THE PERSIAN GULF—2: The Persian Gulf's petrochemical industry is proliferating—Abdullah M. Aitani and Syed Halim Hamid	9-22	73
DOWNSTREAM IN THE PERSIAN GULF—Conclusion: To diversify its petrochemicals portfolio, GCC needs liquid feeds—Abdullah M. Aitani and Syed Halim Hamid	9-29	96
LATIN AMERICA (General)		
Repsol, Pluspetrol eye Latin American accord	2-3	35
Outlook bright for Latin American energy	4-28	40
ENERGY COMPANY SECURITY. Managing energy company security risks in Latin America—Justine Barrett	6-9	44
Brazilian deals mark gas/power convergence	7-28	37
LIBYA		
IPC unit slates exploration in Libyan basin	1-13	30
AFRICA REPORT. Legal improvements brighten North Africa production outlook	5-12	48
COMMENT: U.S. sanctions against oil giants at odds with i ts Caspian policy—Manouchehr Takin	10-13	27
CanOxy acquires Libyan farmout from Bula	10-20	40
MALAYSA		
Malaysia pipeline to carry 2 million b/d	1-13	30
Malay-Thai JDA seen as mainstay for Thailand natural gas supply	1-27	26
IPC pressing development in Viet-Malay area	3-31	36
Malaysian refining/marketing boom on tap	5-19	37
Thai-Malay JDA exploration on brisk pace	7-21	94
New plan seeks to boost Malaysian gas output	7-21	34
Malaysials Peninsular Gas system gets another segment—C. F. Savini	12-1	54
MAURITANIA		
Hardman Resources obtains pact for exploration off Mauritania	2-3	64
MEXICO		
TransCanada group gets Mexican pipeline nod	3-31	38
U.S.-Mexico gulf treaty pressures rising	5-12	34
U.S. LPG pipeline begins deliveries to Pemex terminal—Kevin C. Bodenhamer	8-11	55
Mexico's first open access gas line funded	10-6	34
Pemex launches massive Cantarell project	10-20	38
Pemex plans large program to expand Burgos basin gas output	11-10	89
Pemex lobbying against tariff cut proposal	12-1	34
COMMENT—Mixed signals in Mexican gas markets: Long-term competition benefits delayed—George Baker	12-8	28
COMMENT: Mexican gas LDCs seen booming under privatization program	12-8	30
U.S., Mexico soon to delineate gulf 'gap'	12-15	27
MIDDLE EAST (General)		
NATURAL GAS IN THE MIDDLE EAST. Gas projects surge in the Middle East as governments seek new revenue sources—Michael D. Williams	2-24	54
Mixed outlook for Middle East gas projects	3-24	28
Talking in the Middle East	10-6	21
MOLDOVA		
Independent to start gas flow in Moldova	2-3	63
MOROCCO		
Cabre wins three Morocco permits	5-12	35
MOZAMBIQUE		
Scimitar slates two Mozambique wildcats	6-16	32
Exploration plans flourish in Mozambique	9-8	34
MYANMAR		
U.S. economic sanctions cloud Myanmar E&D action	5-5	38
FOCUS: EXPLORATION. An integrated oil industry runs in Chindwin basin, Myanmar—E. F. Durkee and M. J. Gerrard	10-20	63
FOCUS: EXPLORATION. Myanmar's Indaw/Chindwin area has Tertiary, Cretaceous targets—Ed F. Durkee	10-20	76
Exiting Myanmar—David Knott	12-15	25
NETHERLANDS		
Petrochemical capacity expansions abound	2-24	40
REFINING REPORT. Dutch refinery nears completion of major renovation—Anne K. Rhodes	3-17	60
Dutch offshore operators cut production costs	4-14	25
NEW ZEALAND		
NEW ZEALAND BASINS—1: Overview of New Zealand's petroleum systems, potential—Richard Cook and Roger Gregg	1-6	55
NEW ZEALAND BASINS—2: Southern, eastern New Zealand petroleum systems examined—Richard Cook and Roger Gregg	1-13	62
New Zealand E&D percolating	3-24	33
Large gas discovery gauged in Taranaki basin	10-27	81
FOCUS: EXPLORATION. New Zealand's Canterbury basin prospects reviewed in a continental Gondwana setting—Tom Haskell and Ian Wylie	12-15	57
NIGERIA		
Shell Nigeria staff held as dispute turns ugly	3-31	31
AFRICA REPORT. Interest grows in African oil and gas opportunities—David Knott	5-12	41
Teamwork, technology boost reserves, output off Nigeria—Kirk H. Van Sickle, Elaine L. Cash, and Mike Hugentobler	7-14	69
A personal letter from Nigeria—David Knott	8-11	33
NORTH SEA		
Norwegian N. Sea developments slated	1-6	25
U.K. operators refute North Sea pollution claims	1-27	35
U.K., not Shell, pushed to dump Brent spar—	2-3	28
Borealis expands polypropylene interests	2-3	35
FOCUS: EXPLORATION. What do recent N. Sea unit cost changes mean—M. A. Adelman	2-3	45
N. Sea operators confirm development plans	2-17	26
Conoco eyes novel floater for Banff field	3-3	31
U.K. North Sea HP/HT developments spreading	3-17	36
Texaco starts production in Captain field	3-24	30
Elf lets contracts for Elgin/Franklin jack-up platform	3-24	32
Esso Norge presses Jotun development work	3-31	35
Shell/Esso plans disposal of Fulmar loading buoy	3-31	36
Shell/Esso to use PES—smartv well completion system	4-7	36
Offshore Northwest Europe development activity simmering	4-7	37
Conoco gets nod to develop Viking satellites	4-7	37
U.K. sanctions major HP/HT developments	4-21	29
OFFSHORE PETROLEUM OPERATIONS. Dredger works for North Sea pipelays	5-5	82
OFFSHORE PETROLEUM OPERATIONS. Gras Dowr joins world's FPSO fleet	5-5	84
Phillips begins output in Judy and Joanne fields	5-12	30
Batch drilling in the North Sea expedites extended-reach drilling—Brian G. Teggart, Charles L. Dunne, and Richard D. Wilkinson	6-9	52
Enron draws one, loses one in U.K. gas supply tiff	6-16	30
Shell/Esso lets Ketch platform contract	8-4	30

	Date	Page
North Sea dilemma—David Knott	8-25	25
North Sea reserves life pegged at 25 years—David Knott	9-15	26
E&P sector spending still gaining momentum	9-22	38
Gas developments highlight NW Europe action	10-13	36
U.K., Norway revive rigs-to-reefs ideas—David Knott	10-13	38
Ice plug employed on subsea pipeline bend during repair	12-22	101
NORWAY		
Norwegian N. Sea developments slated	1-6	25
Hydro plans Oseberg-Statpipe gas line	1-13	30
BP lets contract to Statoil for Pierce FPSO design	1-20	24
Saga discloses Norwegian Sea gas/condensate discovery	1-27	32
Statoil building drillship, shuttle tankers	2-3	28
Statoil lets contract for giant gas semi	2-10	30
Statoil chief maps out strategy	2-24	32
Norway secures first gas sales contract with Italy	2-24	38
Statoil opts for big riser base for Aasgard gas	3-3	32
Esso Norge presses Jotun development work	3-31	35
NPD hikes Norway shelf resource estimate	4-14	103
U.K., Norway settle Frigg treaty squabble	5-5	58
Norway allocates big Barents Sea licenses	5-26	28
Statoil, Conoco dedicate giant Norwegian methanol plant	7-14	26
Statoil deals allow Chevron to return to Norway	7-21	35
OFFSHORE NORTHERN EUROPE. Aker develops new floating production concept for small fields	8-25	65
OFFSHORE NORTHERN EUROPE. Norway develops free-swimming survey submersible	8-25	70
OFFSHORE NORTHERN EUROPE. World's largest gas floater under construction in Norway	8-25	82
North Sea reserves life pegged at 25 years—David Knott	9-15	26
Norway studies deepwater exploration/development options	11-3	26
U.S., Japan, Norway to study long-term CO_2 disposal options	12-15	18
LNG plant eyed for Norwegian Sea fields	12-15	24
OMAN		
NATURAL GAS IN THE MIDDLE EAST. LNG projects make progress in Oman and Yemen	2-24	62
S. Koreans buy into Oman LNG project	3-17	28
Canadian firms pressing Oman exploration	5-12	32
Union Texas, Oman oil form exploration, development joint venture in Kazakhstan	5-26	88
Oman marks progress on LNG export project	6-2	34
Thailand sending mixed signals on status of Omani LNG deal	6-2	36
DOWNSTREAM IN THE PERSIAN GULF—1: Gulf countries continue to increase refinery capacity, complexity—Abdullah M. Aitani and Syed Halim Hamid	9-15	36
DOWNSTREAM IN THE PERSIAN GULF—2: The Persian Gulf's petrochemical industry is proliferating—Abdullah M. Aitani and Syed Halim Hamid	9-22	73
DOWNSTREAM IN THE PERSIAN GULF—Conclusion: To diversify its petrochemicals portfolio, GCC needs liquid feeds—Abdullah M. Aitani and Syed Halim Hamid	9-29	96
FOCUS: PRODUCTION. Real-time automation optimizes production economics in Oman—Ron Cramer, Cleon Dunham, and Alley Al Hinai	11-24	65
PAKISTAN		
Lasmo steps up Pakistan search	1-27	31
Indus basin off Pakistan contains few wells—Viqar un Nisa Quadri and S. M. G. J. Quadri	6-16	68
Pakistan chooses Beicip to study its gas import prospects	8-4	25
Accord inked for Pakistan-Turkmenistan line	8-4	25
Turkmen-Pakistani export gas pipeline marks progress	11-3	31
Union Texas hopes to reproduce its Pakistan Badin experience—G. Alan Petzet	11-3	86
PAPUA NEW GUINEA		
Papua New Guinea project approved	2-10	30
Papua New Guinea seeks help to develop gas	6-2	38
Gas to pace Aussie energy demand growth	9-22	29
PARAGUAY		
Nonproducing Paraguay to get rare wildcats—G. Alan Petzet	4-21	76
PERU		
Philippine refiner completes low-sulfur diesel upgrade—Samuel S. Candido and Elino V. Crisostomo	1-27	74
Mobil group to explore Peruvian blocks	4-7	38
ENERGY COMPANY SECURITY. Managing energy company security risks in Latin America—Justine Barrett	6-9	44
Perupetro scraps bids for blocks, slates new round	6-16	33
Pluspetrol slates drilling program in Peru	6-30	37
Exploration work accelerating in Peruvian jungle	7-7	31
U.S., Lima firms to explore Peruvian block	8-25	44
Latest Peruvian privatization sale back on track	9-22	36
PHILIPPINES		
Philippines gas field development on track	6-30	37
Filipino fuels fuss—Patrick Crow	10-27	35
Philippines crisis	11-17	44
POLAND		
Exploration outlook gains strength in Poland	5-5	132
PORTUGAL		
Exploratory well to start in Lusitanian basin, Portugal—Thomas Uphoff, George Allen, Michael Stearns, and Patric Monteleone	12-8	67
PUERTO RICO		
Puerto Rico project to take Trinidad LNG	12-22	27
QATAR		
Qatar projects win Ex-Im Bank support	1-27	30
NATURAL GAS IN THE MIDDLE EAST. Qatargas exporting LNG from Qatar's new Ras Laffan port	2-24	49
DOWNSTREAM IN THE PERSIAN GULF—1: Gulf countries continue to increase refinery capacity, complexity—Abdullah M. Aitani and Syed Halim Hamid	9-15	36
DOWNSTREAM IN THE PERSIAN GULF—2: The Persian Gulf's petrochemical industry is proliferating—Abdullah M. Aitani and Syed Halim Hamid	9-22	73
DOWNSTREAM IN THE PERSIAN GULF—Conclusion: To diversify its petrochemicals portfolio, GCC needs liquid feeds—Abdullah M. Aitani and Syed Halim Hamid	9-29	96
REPUBLIC OF CHECHNYA		
Russia's Caspian line to bypass Chechnya	10-20	41
REPUBLIC OF CONGO (Formerly Zaire)		
E&D to accelerate off Republic of Congo	6-23	25
ROMANIA		
Amoco to boost Romanian gas output	7-7	27
RUSSIA		
BP/Statoil to upgrade Russian semi for Caspian prospect	1-20	32
Jet pump feeds corrosion inhibitor in Russian waterflood—I. S. Yuden, Y. A. Sazanov, V. N. Yeliseev, and B. A. Malov	1-27	88
WORLD PIPELINE CONSTRUCTION. Gazprom and Neste plan North European gas pipeline	2-10	38
Sakhalin group slates giant oil/gas platform	2-24	36
Agip plans mobile gasoline stations for Russia	6-23	36
Energy czar—Patrick Crow	7-14	28
First progress seen for Russian PSA legislation	7-14	28
Calgary firm slates Siberian drilling	7-14	29
Russian Barents Sea licensing on tap	7-28	41
RUSSIA REPORT. Russia struggles toward refinery modernization goals—Mikhail G. Rudin, and Valeri S. Plotnikov	8-18	31
RUSSIA REPORT. Incomplete privatization mixes ownership of Russia's oil industry—Eugene M. Khartukov	8-18	36
RUSSIA REPORT. Pipeline gas trade between Asian Russia, Northeast Asia gets fresh look—Keun-Wook Paik and Jae-Yong Choi	8-18	41
Wingas starts work on Yamal gas link	8-25	36
Russia's Caspian line to bypass Chechnya	10-20	41
Black Sea Energy JV to explore new Tyumen block	11-3	30
OGJ SPOTLIGHT. Royal Dutch/Shell forms development alliance with Gazprom	11-24	32
FSU megadeal action suddenly heating up—David Knott	11-24	42
Cluster and dual-lateral drilling technologies optimize Russian well production—Ravil Gabdullinovich Salikhov, Evgeny Fedyorovich Dubrovin, and Vladimir Vladimirovich Sledkov	11-24	53
Russia approves plan to privatize Rosneft	12-1	36
Dagestan offers Caspian exploration blocks	12-29	29
SARDINIA		
Shell, Petronas to develop Sarawak gas	1-27	30
SAUDI ARABIA		
Accord inked for Pakistan-Turkmenistan line	8-4	25
DOWNSTREAM IN THE PERSIAN GULF—1: Gulf countries continue to increase refinery capacity, complexity—Abdullah M. Aitani and Syed Halim Hamid	9-15	36
DOWNSTREAM IN THE PERSIAN GULF—2: The Persian Gulf's petrochemical industry is proliferating—Abdullah M. Aitani and Syed Halim Hamid	9-22	73
DOWNSTREAM IN THE PERSIAN GULF—Conclusion: To diversify its petrochemicals portfolio, GCC needs liquid feeds—Abdullah M. Aitani and Syed Halim Hamid	9-29	96

	Date	Page
SENEGAL		
Benton inks Senegal E&D MOU	12-22	27
SLOVAKIA		
Study identifies upgrade scenarios for Slovak gas system—Ján Rajzinger, Andreas Dercz, Frank-Ulrich Müller, and Rolf Zeppenfeld	4-7	71
SOUTH AFRICA		
Synthetic fuels aiding South Africa to advance its world energy role—David Knott	3-17	23
Soekor nears completion of S. Africa's first oil field development	3-17	26
AFRICA REPORT. Interest grows in African oil and gas opportunities—David Knott	5-12	41
Phillips group exploring off South Africa	5-19	36
Potential outlined in Southern Outeniqua basin off S. Africa—Jacques Roux	7-21	87
Exploration plans flourish in Mozambique	9-8	34
SOUTH AFRICA OFFSHORE E&P—1: Exploration to first production on Block 9 off South Africa—Paul L. A. Burden and Christopher P. N. Davies	9-8	92
SOUTH AFRICA OFFSHORE E&P—2: Oribi field is South Africa's first offshore crude oil production—Paul L. A. Burden and Christopher P. N. Davies	9-15	63
SOUTH AMERICA		
SOUTH AMERICA REPORT. Foreign petroleum companies developing new paradigm for operating in the rain forest region—Bob Williams	4-21	37
SOUTH AMERICA REPORT. Oxy's strategy on environment, community issues key to success of project in Ecuador's rain forest—Bob Williams	4-21	44
SOUTH AMERICA REPORT. Managing nontechnical risks associated with seismic operations in the tropical rain forests of Ecuador—Gary Barker, Gordon R. Smith, Francisco J. Vacas, Evan K. Swingholm, Richard M. Yuill, and Miguel A. Aleman	4-21	50
SOUTH KOREA		
S. Koreans buy into Oman LNG project	3-17	28
ASIA's DOWNSTREAM EXPANSION. South Korea's refining/petrochemical capacity expansion push continues to gather momentum	7-7	19
S. Korea's Yukong sets U.S. E&D joint venture—G. Alan Petzet	7-28	89
Japanese, South Korean yards get 10 tanker orders	11-17	40
SOUTHEAST ASIA		
Geology of Brunei deltas, exploration status updated—Jan Schreurs	8-4	76
BP to expand olefins capacity in Southeast Asia	9-15	27
WoodMac: SE Asia lines up 54 developments	9-15	31
FOCUS: EXPLORATION. Petroleum systems, resources of Southeast Asia, Australasia—Jim Howes	12-15	52
SPAIN		
Repsol, Pluspetrol eye Latin American accord	2-3	35
OGJ SPOTLIGHT: Repsol fine-tuning international strategy for growth, repositioning	11-3	19
OGJ SPOTLIGHT: Repsol scores a record and a first with U.S. stock offering	11-3	25
SUDAN		
Sudan E&P continues to make advances	2-24	37
Oil at center of U.S. sanctions aimed at Sudan	11-10	42
SWEDEN		
First automated refueling system on trial	6-23	27
SWITZERLAND		
Switzerland exploration may resume—Patrick H. Lahusen	6-23	78
New exploration concepts spark Swiss gas, oil prospects—Roland Schegg, Werner Leu, and Emil Greber	9-29	102
THAILAND		
Thailand expanding, intergrating gas and electric power sectors	1-27	25
Malay-Thai JDA seen as mainstay for Thailand natural gas supply	1-27	26
Total group may hike Bongkot outlays	2-24	37
Gulf of Thailand E&D action at brisk pace	5-19	34
Thailand sending mixed signals on status of Omani LNG deal	6-2	36
Thai-Malay JDA exploration on brisk pace	7-21	94
Total group starts big 3D program in Thai gulf	7-21	94
Natural gas surplus may be ahead in Thailand	7-21	32
Thailand's petrochemical demand grows; two plants proposed	7-21	34
Firms to study Thai onshore gas line	8-25	36
FOCUS: PRODUCTION. Vibration suppression critical in FPSO design, offshore Thailand	11-24	77
Puerto Rico project to take Trinidad LNG	12-22	27
Prices in place for Thai privatization—David Knott	12-22	29
Thailand's economic crisis affecting gas strategy, projects	12-29	18
Thai government cuts LPG subsidies	12-29	22
Thai R&M fights currency crisis—David Knott	12-29	23
TIMOR SEA		
Giant production barge slated for Timor Sea	1-20	28
Phillips group completes Bayu-Undan appraisal	2-10	64
Australia's southeastern Bonaparte basin has plenty of potential—Shige Miyazaki	4-21	78
Potential seen in areas off Northwest, Southeast Australia—Paul E. Williamson	11-24	84
TRINIDAD/TOBAGO		
FOCUS: EXPLORATION. Trinidad and Tobago enjoying exploration boom	2-3	37
BG to develop gas discoveries off Trinidad	4-14	24
Innovations help exploit mature Trinidad land fields—Stanley R. Wharton and John Kenns-Dumas	6-30	77
TUNISIA		
Governments eye gas incentives	7-14	30
TURKEY		
Iraq and Turkey plan gas export pipeline	1-20	30
Booming oil/gas demand, limited potential push TPAO abroad—John Kennedy	2-24	29
TURKMENISTAN		
CENTRAL ASIAN FSU. Caspian reserves luring operators—Frank C. Alexander Jr.	7-21	23
CENTRAL ASIAN FSU. How oil, gas investment prospects compare for Azerbaijan, Kazakhstan—Richard R. Dion	7-28	25
CENTRAL ASIAN FSU. Turkmenistan emerging as key player in central Asian FSU	7-28	26
CENTRAL ASIAN FSU. Tengiz experience example of oil revitalization advancing in FSU—Richard H. Matzke	8-4	20
Accord inked for Pakistan-Turkmenistan line	8-4	25
CENTRAL ASIAN FSU. COMMENT: Caspian Sea projects advancing after Aliyev state visit to Washington	8-11	24
Turkmenistan details Caspian license round	9-29	39
Turkmen-Pakistani export gas pipeline marks progress	11-3	31
UKRAINE		
Ukraine steps up efforts to boost gas output, upgrade gas grid	12-29	26
Independents eye Ukrainian E&D project	12-29	26
UNITED ARAB EMIRATES		
Tiny Ajman to see exploration, production work	4-21	29
DOWNSTREAM IN THE PERSIAN GULF—1: Gulf countries continue to increase refinery capacity, complexity—Abdullah M. Aitani and Syed Halim Hamid	9-15	36
DOWNSTREAM IN THE PERSIAN GULF—2: The Persian Gulf's petrochemical industry is proliferating—Abdullah M. Aitani and Syed Halim Hamid	9-22	73
DOWNSTREAM IN THE PERSIAN GULF—Conclusion: To diversify its petrochemicals portfolio, GCC needs liquid feeds—Abdullah M. Aitani and Syed Halim Hamid	9-29	96
UNITED KINGDOM		
Sea Empress oil spill response questioned	1-27	34
U.K. operators refute North Sea pollution claims	1-27	35
U.K., not Shell, pushed to dump Brent spar—	2-3	28
U.K. study to target offshore blast risk	2-3	31
Conoco eyes novel floater for Banff field	3-3	31
British Gas marks end of restructuring	3-10	26
BP discloses new West of Shetland strike	3-10	31
U.K. North Sea HP/HT developments spreading	3-17	36
ARCO produces first gas from Trent, Tyne fields	3-17	38
Texaco starts production in Captain field	3-24	30
Elf lets contracts for Elgin/Franklin jack-up platform	3-24	32
Deepwater success spurs leasing competition	3-24	32
Premier takes a fresh look at old plays	3-24	34
Greenpeace bids for U.K. frontier acreage	3-31	35
U.K. first choice for new E&P ventures	3-31	35
Shell/Esso plans disposal of Fulmar loading buoy	3-31	36
U.K. opens up more areas to gas competition	3-31	39
Shell/Esso to use PES—smartv well completion system	4-7	36
Offshore Northwest Europe development activity simmering	4-7	37
Conoco gets nod to develop Viking satellites	4-7	37
U.K. awards licenses in frontier round	4-14	30
U.K. sanctions major HP/HT developments	4-21	29
Tanker inspection methods updated	4-28	42

	Date	Page
U.K., Norway settle Frigg treaty squabble	5-5	58
Fina/Total's U.K. refinery starts up CHP project	5-5	58
OFFSHORE PETROLEUM OPERATIONS. Gras Dowr joins world's FPSO fleet	5-5	84
Phillips begins output in Judy and Joanne fields	5-12	30
GUIDE TO WORLD CRUDES: Welsh crude is very light and sweet—Anne K. Rhodes	5-12	71
Diverless bolt assembly system tested	5-12	31
Foinaven field development off track again	5-19	33
Interconnector to cut gas prices, contracts—	6-2	38
Shell receives Brent spar buoy disposal plans	6-16	30
Enron draws one, loses one in U.K. gas supply tiff	6-16	30
BG to prune worldwide exploration and production portfolio	6-23	26
BG must accept gas transport charge cuts	6-23	26
New turbo units going to U.K.	6-23	59
U.K. utilities hit by—windfallv taxation plan	7-14	27
U.K. presses charges over oil spill	7-28	38
U.K. to ease access to offshore work plans	8-4	30
U.K. Atlantic Frontier legal review slated	8-4	30
Shell/Esso lets Ketch platform contract	8-4	30
U.K. sets 5-year offshore licensing plan	8-11	32
OGJ SPOTLIGHT: BP slates world-scale expansions at its Grangemouth complex—David Knott	8-18	15
OGJ SPOTLIGHT: BP cracks polymer recycling technique at Grangemouth	8-18	18
How to deal with "greensv—David Knott	8-18	27
BP proves diverless connection method in Foinaven	9-1	32
U.K. operators start up three oil fields	9-1	32
Statoil results off Ireland not good	9-1	36
U.K.'s radical transport plan—David Knott	9-1	38
Shell to buy Gulf U.K. retail operations	9-1	40
More U.K. gas markets slated to open Nov. 1	9-8	38
North Sea reserves life pegged at 25 years—David Knott	9-15	26
U.K. taxation green herring—David Kontt	9-22	36
E&P sector spending still gaining momentum	9-22	38
Oil company name for sale—David Knott	10-6	35
Gas developments highlight NW Europe action	10-13	36
U.K., Norway revive rigs-to-reefs ideas—David Knott	10-13	38
BG accepts Ofgas pricing formula	10-20	42
U.K. sees first deliveries by LNG trucks	10-27	32
Shell reveals Brent spar safety analysis	10-27	34
U.K. operators mark progress with floaters	11-3	26
U.K.'s MMS ready to drill off Bulgaria—David Knott	11-3	31
U.K. record well tops NW Europe action	11-17	31
OGJ SPOTLIGHT. Royal Dutch/Shell reinventing itself as total energy company—David Knott	11-24	29
OGJ SPOTLIGHT. Royal Dutch/Shell forms development alliance with Gazprom	11-24	32
Maxus sells power from Indonesian floater	11-24	36
U.K. renewable mandates	12-1	27
Foinaven start tops NW Europe action	12-8	21
Centrica wins new deals for U.K. gas	12-15	22
ARCO wins hot West of Shetland blocks	12-15	27
Joint tester reduces hydrocarbon leaks	12-15	32
UZBEKISTAN		
CENTRAL ASIAN FSU. Caspian reserves luring operators—Frank C. Alexander Jr.	7-21	23
CENTRAL ASIAN FSU. How oil, gas investment prospects compare for Azerbaijan, Kazakhstan—Richard R. Dion	7-28	25
CENTRAL ASIAN FSU. Tengiz experience example of oil revitalization advancing in FSU—Richard H. Matzke	8-4	20
CENTRAL ASIAN FSU. Uzbekistan attracting more foreign investment in oil and gas	8-4	23
CENTRAL ASIAN FSU. COMMENT: Caspian Sea projects advancing after Aliyev state visit to Washington	8-11	24
U.K. eyes 10% renewables power share	11-24	36
VENEZUELA		
FOCUS: DRILLING. Ream-while-drilling tool cuts costs of three Venezuelan wells—Jorge Rodriquez Rothe, Leandro J. Carre C., Richardo Portillo, and Marcos Leal	1-13	33
Total group studying Orinoco megaproject	2-24	36
Pdvsa readies third marginal fields round	6-2	30
Venezuela's marginal fields draw heavy bids	6-9	20
GUIDE TO WORLD CRUDES: Assays of two Venezuelan crudes differ significantly—Anne K. Rhodes	6-9	58
Venezuelan bidding round tops $2 billion	6-16	27
Pdvsa launches first major organization restructuring	7-28	40
Access to future Venezuelan output secured	7-28	40
Orinoco project accord signed	8-4	31
Pdvsa completes study of Venezuela-Florida oil pipeline	8-25	37
Merger of Venezuelan refineries delayed	8-25	37
Phillips, Pdvsa ink coker, crude sale deal	9-1	40
Venezuelan field gets OPIC funds	10-27	35
Technology pushes Venezuela's heavy-oil projects ahead—J. Inciarte	12-8	52
Venezuelan firm cuts gas-plant costs with 3D modeling	12-22	99
VIET NAM		
IPC pressing development in Viet-Malay area	3-31	36
Exploration sags off Viet Nam	11-3	32
Viet Nam slates its first gas processing plant	11-3	32
YEMEN		
NATURAL GAS IN THE MIDDLE EAST. LNG projects make progress in Oman and Yemen	2-24	62

U.S.

	Date	Page
ALABAMA		
Central-northern Appalachian coalbed methane flow grows—Paul C. Lyons	7-7	76
Mobile Bay gas enjoying banner year despite production problems—William W. Wade and Jay Plater	11-10	29
3D, CAEX technologies improve Norphlet exploration/development	11-10	31
ALASKA		
Alyeska program allows pig performance comparison—Patrick H. Vieth, Steven W. Rust, Elden R. Johnson, and Michael L. Cox	2-10	52
West Sak oil development project approved	3-10	31
BLM survey finds Alyeska's woes continue	4-7	32
MMS lease sale to offer Cook Inlet tracts	4-28	36
Alyeska to close two more TAPS pump stations	5-5	54
FOCUS: EXPLORATION. North Slope satellite projects spark Alaska exploration	5-26	50
North Slope producers see Alaska renaissance as TAPS reaches 20	6-16	22
Alyeska reorganizing structure of TAPS operations	6-16	26
FOCUS: PIPELINES. New versions of gas turbine being shipped	9-15	60
Japanese firms eye Alaskan LNG project stake	9-29	50
ARCO orders two new-generation oil tankers	11-17	42
A native corporation evaluates potential of Alaska's Kandik area—David M. Hite	11-17	89
BLM eyeing NPR-A leasing	12-8	34
ALASKA (Offshore)		
Cook Inlet Lease Sale 149 scheduled for April	1-13	26
Cook Inlet Sunfish development possible	1-13	26
ARIZONA		
Phillips eyes Texas-Arizona products line	5-5	56
Arizona's Holbrook salt basin holds oil, gas opportunities—Edgar B. Heylmun	5-5	127
Arizona carbon dioxide accumulation may extend into New Mexico	5-5	128
Arizona's Holbrook CO_2 area may hold oil, gas reserves—G. Alan Petzet	10-20	84
ARKANSAS		
Arkansas turbidite studies may aid Oklahoma Jackfork exploration—Roger M. Slatt, Hisham Al-Siyabi, Eugene T. Williams, Charles G. Stone, Paul Weimer, Robert J. Davis, and Douglas W. Jordan	8-18	67
From Arkansas to Bourbon Street—L. R. Aalund	10-6	19
CALIFORNIA		
Elk Hills shallow oil zone development eyed	1-6	59
U.S. DOE continues to pursue sale of Elk Hills oil field	1-13	22
Exxon, Santa Barbara County settle oil transport suits	1-13	25
California refinery meets seismic codes using new wrapping technique—Thomas T. Hwang and William C. Wehnes	3-31	70
California oil line finally gets green light	5-5	54
DOE launches Elk Hills sale bid process	5-26	24
Shell, Mobil agree to combine California E&P	6-9	24
PETROLEUM PRODUCTS MARKETING: California marketers face new onslaught of RFG criticism—Barbara Saunders	6-23	47
California's Benton seeks PSA in Jordan	8-18	29
Horizontal well kick-starts California field	8-18	72
Monterey Resources agrees to Texaco merger	8-25	38
Oxy to get Elk Hills stake for $3.65 billion	10-13	35
Texaco explores near giant McKittrick field	10-20	85
Unocal wins first round of CARB RFG patents war	11-3	33
Elk Hills ready for new horizontal drilling chapter	12-15	71
California senators targeting MTBE use in the state	12-22	25
Economic models verify heavy oil profitability—G. Warfield Hobbs IV and Robert O. Winkler	12-22	91

	Date	Page
CALIFORNIA (Offshore)		
Abandonment looms for fields off California	1-13	24
COLORADO		
UPR slates big Colorado gas/helium project	4-14	29
More data point to potential in S. Colorado sub-basin—John Morel and Tom Watkins	9-1	78
FLORIDA		
Pdvsa completes study of Venezuela-Florida oil pipeline	8-25	37
MMS reviewing Destin Dome project	8-25	38
Coastal lists Smackover, Sunniland objectives in gulf off Florida—G. Alan Petzet	9-29	101
GULF OF MEXICO		
Laybarge floated from Gulf of Mexico seabed	1-6	45
First spar facility installed in the Gulf of Mexico	1-13	53
Two eastern Gulf of Mexico gas lines merge	1-20	30
THE GULF OF MEXICO'S REVIVAL. Deepwater, subsalt prospects open new era for Gulf of Mexico action—Richard Wheatley	1-20	37
THE GULF OF MEXICO'S REVIVAL. SeaStar TLP due first installation in Gulf of Mexico	1-20	42
THE GULF OF MEXICO'S REVIVAL. Technology gives gulf prospects world-class investment appeal—John H. Miers	1-20	50
Deepwater finds boost U.S. associated gas	2-3	26
Amoco, Shell slate another TLP for eastern Gulf of Mexico	2-3	26
MMS slates sale for central gulf	2-10	28
British-Borneo hikes Morpeth reserves	2-24	36
Central gulf OCS Sale 166 another sizzler	3-10	30
Exxon, BP gauge deepwater Gulf of Mexico strike	3-17	32
Independents set the bidding pace during Gulf of Mexico lease Sale 166—Patrick Crow	3-17	34
Deepwater success spurs leasing competition	3-24	32
Ram-Powell TLP nears installation in gulf	4-21	33
Shell advancing gulf deepwater developments—Guntis Moritis	4-28	26
Vastar, British-Borneo slate deepwater Gulf of Mexico exploration	4-28	30
U.S.-Mexico gulf treaty pressures rising	5-12	34
New lift system tested in gulf	5-19	76
Gulf of Mexico pipelay	6-23	59
Shell orders ultradeepwater semi for Gulf of Mexico work	7-7	30
More deepwater exploration slated in gulf	7-7	30
Gulf of Mexico subsalt exploration frontier still on learning curve—Barbara Saunders	7-14	19
Subsalt exploration interest spreading outside Gulf of Mexico	7-14	22
Poseidon pipeline expands in Gulf of Mexico	7-14	23
U.S. gulf-related gas processing to expand	8-4	32
Gulf of Mexico sour crude-oil lines to see increase	8-18	50
Non-U.S. firms making their marks in sizzling Gulf of Mexico plays	9-1	23
Pipelaying under way for Marathon's deepwater gulf projects	9-1	25
Another jack up restored to Gulf of Mexico service	9-1	30
Deep water focus of latest record gulf sale	9-1	30
Rig concerns don't stem gulf sale confidence	9-8	36
Coastal lists Smackover, Sunniland objectives in gulf off Florida—G. Alan Petzet	9-29	109
Deepwater semi upgrade nearing completion	11-10	40
Shell contracts pile swager for gulf platforms	11-17	28
CNG unit makes three gas discoveries in Gulf of Mexico	11-17	28
BP group starts up Troika field in Gulf of Mexico	11-17	44
Work barge ready for gulf work	12-1	41
U.S., Mexico soon to delineate gulf 'gap'	12-15	27
KANSAS		
Kansas gas producers facing huge payback	9-22	33
Anadarko, Mobil form deep Hugoton alliance	12-1	40
KENTUCKY		
Central-northern Appalachian coalbed methane flow grows—Paul C. Lyons	7-7	76
LOUISIANA		
Conoco, Pennzoil start up Louisiana lubes plant	4-21	27
Texaco plans Louisiana NGL system expansion	4-28	38
A geological assessment: What's ahead for Louisiana Austin chalk—William T. Maloy	6-2	149
Surge in gulf gas will impact Louisiana facilities—Rebecca B. Roberts	8-18	45
Deep water focus of latest record gulf sale	9-1	30
Galveston Bay gas prospects heating up—Alan Petzet	9-22	33
PIPELINE REPORT. Enchilada platform anchors offshore Louisiana transportation network—Dale M. Gallaher and Michael J. Mahoney	10-27	45
Crude-laden double-hulled tanker survives gash without a spill	11-24	44
Tuscaloosa marine shale may be untouched Gulf Coast oil play—Chacko J. John, Bobby L. Jones, Reed Bourgeois, Brian J. Harder, and James E. Moncrief	12-29	91
MARYLAND		
Central-northern Appalachian coalbed methane flow grows—Paul C. Lyons	7-7	76
MICHIGAN		
Michigan to get horizontal and directional well projects—G. Alan Petzet	8-11	80
MISSISSIPPI		
Interest grows in Mississippi's Upper Jurassic Cotton Valley trend—Stephen D. Champlin	6-23	75
U.S. gulf-related gas processing to expand	8-4	32
New Cretaceous pay zones opened in southern Mississippi's Brookhaven field—G. Alan Petzet	11-17	93
Tuscaloosa marine shale may be untouched Gulf Coast oil play—Chacko J. John, Bobby L. Jones, Reed Bourgeois, Brian J. Harder, and James E. Moncrief	12-29	91
MONTANA		
Montana reservoir management plan launched	1-6	58
Red River play, Gulf Canada deal boost Williston basin	1-20	75
Forest Service blocks leasing in Montana national forest	9-29	44
NEBRASKA		
Oil production dominates in Nebraska's Dundy County—Raymond R. Burchett	10-20	86
Cambridge arch exploration simmers	10-20	86
NEW MEXICO		
Arizona carbon dioxide accumulation may extend into New Mexico	5-5	128
Large U.S. liquids plant starts up—Paul B. Milios and Richard A. Harris	5-12	60
FOCUS: PIPELINES. Electric-motor drives installed in New Mexico	6-16	48
NEW YORK		
Paleogeomorphic mapping applied in Stagecoach gas field, N.Y.—Arthur J. Pyron	12-22	106
NORTH DAKOTA		
Red River play, Gulf Canada deal boost Williston basin	1-20	75
OHIO		
Ohio oil and gas activity, exploration on the upswing—Michael P. McCormac	6-9	67
Central-northern Appalachian coalbed methane flow grows—Paul C. Lyons	7-7	76
OKLAHOMA		
Arkansas turbidite studies may aid Oklahoma Jackfork exploration—Roger M. Slatt, Hisham Al-Siyabi, Eugene T. Williams, Charles G. Stone, Paul Weimer, Robert J. Davis, and Douglas W. Jordan	8-18	67
YPF/Amoco accord marks latest U.S. toehold by non-U.S. firm	9-1	26
Anadarko, Mobil form deep Hugoton alliance	12-1	40
PENNSYLVANIA		
Central-northern Appalachian coalbed methane flow grows—Paul C. Lyons	7-7	76
TENNESSEE		
Tennessee Gas joins U.S. Northeast gas pipeline fray	4-14	28
E&P operations blossom in Central Tennessee	6-2	153
Overton County led recent Tennessee oil action—Ronald P. Zurawski	6-9	71
Central-northern Appalachian coalbed methane flow grows—Paul C. Lyons	7-7	76
TEXAS		
East Texas Cotton Valley pinnacle reef E&D emerging as hot gas play—Richard Wheatley	3-3	23
Central Texas coast gas search bears fruit	3-3	89
3D seismic propels Cotton Valley reef play	3-10	32
Infrastructure of Cotton Valley expanding with exploration and development action	3-10	34
Cotton Valley reef pipeline, E&D expand	4-7	33
Austin chalk wells yield huge flow rates	4-7	33
Pipeline code, unitization top Texas issues—Richard Wheatley	5-5	46
Phillips eyes Texas-Arizona products line	5-5	56
More drilling follows Fort Worth basin find	5-5	134
Conoco buys South Texas Lobo trend assets	6-9	25
Texaco slates gulf-Midcontinent pipeline	6-30	34

	Date	Page
GAS AND POWER FROM REFINING. A Texas project illustrates the benefits of integrated gasification—Jack Philcox and Gary W. Fenner	7-14	41
New targets in the Bone Spring formation, Permian Basin—Bruce S. Hart	7-28	85
Vicksburg, Frio successes lift Galveston Bay area prospects—G. Alan Petzet	8-11	75
Pipeline spill drill tests industry's response capability	8-18	22
YPF/Amoco accord marks latest U.S. toehold by non-U.S. firm	9-1	26
E. Texas Upper Jurassic reefs: An expanding Cotton Valley lime play—Scott L. Montgomery, Gus Wilson, Dan Ziegler, and Keith Hatch	9-22	82
PRODUCTION REPORT. Technology tackles low-permeability sand in South Texas—Terry E. Swift and Paul Mladenka	9-29	68
New well may open production in Marfa basin, Tex.—Scott L. Montgomery	11-10	87
Dallas independent successfully completes major frac job	11-17	34
TEXAS (Offshore)		
Galveston Bay gas prospects heating up--Alan Petzet	9-22	33
UTAH		
Monument jeopardizes area of Utah's resources—G. Alan Petzet	3-24	69
Utah sues U.S. government over trust lands	7-7	29
VIRGINIA		
Central-northern Appalachian coalbed methane flow grows—Paul C. Lyons	7-7	76
WEST VIRGINIA		
Central-northern Appalachian coalbed methane flow grows—Paul C. Lyons	7-7	76
WYOMING		
Tight gas flow growing in Wyoming's Jonah field	1-6	59
Powder River coalbed methane output growing fast—G. Alan Petzet	3-10	79
Deep production climbs in Wyoming's Waltman field	9-1	80

INDUSTRY AFFAIRS

WEEKLY FEATURES

Editorials

Capitalization in Bolivia	1-6	17
The AAA's inventory blunder	1-13	19
New industry in the gulf	1-20	19
The consumer dimension	1-27	23
A corporate welfare crusade	2-3	17
Pena needs an update	2-10	17
Human rights and sanctions	2-17	19
Physical shortage in Bulgaria	2-24	27
More European oil taxes	3-3	21
A bad idea, not forgotten	3-10	19
Saudis and oil consumers	3-17	21
Archer's ethanol assault	3-24	17
Corporate welfare tactics	3-31	19
The Greenpeace method	4-7	23
New thoughts on oil supply	4-14	17
Shifting Caspian politics	4-21	17
Ethanol and oil prices	4-28	19
Improving industry's image	5-5	35
Gasoline, air, and oxygen	5-12	21
Children and air quality	5-19	23
Energy strategy revisited	5-26	17
Deregulating with mandates	6-2	23
A threat not so certain	6-9	13
Permission to explore	6-16	21
The North Slope's lessons	6-23	15
The view from Iowa	6-30	23
Teetering on which edge?	7-7	17
The MMS royalty proposal	7-14	17
IEA's weakening system	7-21	21
The shrinking role of price	7-28	
A climate change sales job	8-4	19
Changing U.S. import mix	8-11	17
Babbitt and climate change	8-18	13
EPA's air rule looks safe	8-25	27
Overregulating G&G data	9-1	21
India's oil subsidies	9-8	21
MMS rethinks royalty plan	9-15	19
Environmental justice	9-22	21
Fast track and trade	9-29	31
Talking in the Middle East	10-6	21
Global warming push begins	10-13	25
U.S. trade inconsistency	10-20	29
GM's gasoline tax	10-27	25
Tests for industry recovery	11-3	17
The ingenuity premium	11-10	27
The wage inflation problem	11-17	23
Hypothesis in policy-making	11-24	27
U.K. renewable mandates	12-1	27
Fear in life and policy	12-8	17
First Kyoto, now reality	12-15	15
The U.S. and Iran	12-22	15
Cost of the Clean Air Act	12-29	17

Journally Speaking

We have ways...—Barbara Saunders	1-6	15
Focus issues—Keith Rappold	1-13	17
'Defining' the gulf—Richard Wheatley	1-20	17
Back to Nigeria—Patrick Crow	1-27	21
Focus on exploration—Alan Petzet	2-3	15
Gas Facts at 50—Warren R. True	2-10	15
A new boom?—Robert J. Beck	2-17	17
Exporting gas and making peace—Bob Tippee	2-24	25
Journal archives—Robert G. Lawson	3-3	19
Sink a well, let it flow? Not quite—Guntis Moritis	3-10	17
Refinery cuisine—Anne K. Rhodes	3-17	19
Globally correct—L. R. Aalund	3-24	15
Industry's No. 1 strategic alliance—Bob Williams	3-31	17
In our own backyard—Laura Bell	4-7	21
Survey RSVP—Marilyn Radler	4-14	15
Native ways—Bob Williams	4-21	15
100 years in B'ville—John L. Kennedy	4-28	17
Vinland and Hispaniola—L. R. Aalund	5-5	33
Africa's bifocal vision—David Knott	5-12	19
Children and air quality—Patrick Crow	5-19	23
Focus on negotiations—Alan Petzet	5-26	15
Bang for the buck—Richard Wheatley	6-2	21
The wizard is out—Barbara Saunders	6-9	11
A question of change—Warren R. True	6-16	19
Seeing the entire global environment—Bob Beck	6-23	13
Technology needs management—Dean Gaddy	6-30	21
Behind the curtain—Bob Williams	7-7	15
The MMS royalty proposal	7-14	17
Finally—L. R. Aalund	7-21	19
The OGJ numbers team—Robert J. Beck	7-28	21
A very loyal reader—John L. Kennedy	8-4	17
Spouting off online—Bob Tippee	8-11	15
Old fields, new opportunities—Guntis Moritis	8-18	11
North Sea dilemma—David Knott	8-25	25
Out of the frying pan—Anne Rhodes	9-1	19
The overworked dollar bill—Bob Tippee	9-8	19
A useful perspective—Warren R. True	9-15	17
Counting the rigs—Dean E. Gaddy	9-22	19
Speech skills—L. R. Aalund	9-29	29
From Arkansas to Bourbon Street—L. R. Aalund	10-6	19
OGJ's energy info menu—Bob Williams	10-13	23
Remote prospects reveal North American optimism—G. Alan Petzet	10-20	27
Critical contacts—Warren R. True	10-27	23
Eco-bunglers target oil personnel—David Knott	11-3	15
Quick learners—L. R. Aalund	11-10	25
Weevil's learning curve—Jennifer Smith	11-17	21
Obstacles for new technology—Guntis Moritis	11-24	25
Saved from obscurity—L. R. Aalund	12-1	25
Shell takes note of Brent spar views—David Knott	12-8	15
The wisdom of spell checker—Patrick Crow	12-15	13
Refiners and GTL hype—Thi Chang	12-22	13
Mother Nature's gift to forecasters—Robert J. Beck	12-29	15

Watching Government—Pat Crow

U.S. import strategy	1-6	24
Oil: Russian energy's weaker sister?	1-13	32
Alaskan opportunity	1-20	33
Global warming plan	1-27	36
Royalty debate heats	2-3	29
Pena's promises	2-20	28
Budget breakout	2-17	28
A shift in Ecuador	2-24	41
Asian ascent	3-3	32
Politics and barbecues	3-10	30
Electric restructuring	3-17	32
NOIA's chief worry today not political	3-24	23
Defending R&D	3-31	40
Signals on Sudan	4-7	31

	Date	Page
PR program falters	4-14	38
Gazprom resurgent	4-21	32
Myanmar sanctions	4-28	37
A monumental controversy	5-5	62
Outlook for Yukos	5-12	36
Star witnesses	5-18	21
Peña's national energy strategy	5-19	40
EPA forges ahead	5-26	25
A grand day	6-2	33
Royalty ruckus	6-9	23
Change in Iran	6-16	33
Deleting an additive	6-23	32
Browner wins big	6-30	36
Global warming impasse	7-7	31
Grand slam on the slope	7-14	15
Energy czar	7-14	28
Eco-credits	7-21	35
Greenhouse price tag	7-28	36
GTL research	8-4	33
Sanctions update	8-11	26
Indian politics	8-18	21
Safety in China	8-25	42
MMS issues	9-1	36
Caspian dispute	9-8	33
Well frac regs loom	9-15	25
DiBona to retire	9-22	34
Campbell wells	9-29	46
Gore becomes pro-oil	10-6	37
Sanctions showdown	10-13	34
Alyeska at the Smithsonian	10-20	42
Filipino fuels fuss	10-27	35
Caspian questions	11-3	33
Gazprom and Iran	11-10	42
Philippines crisis	11-17	44
Decontrol in India	11-24	45
Washington briefs	12-1	32
Another energy czar	12-8	24
Red's straw poll	12-15	29
Colombia's prospects	12-22	26
Interior's 32¢ appeals	12-29	

Watching the World—David Knott

U.K. operators rebut safety criticism	1-6	26
Change ahead in Nigeria?	1-13	27
Now God also is against Shell	1-20	26
U.K. Labour Party's pollution pledge	1-27	35
New data show British Gas vulnerability	2-3	27
Margin hike ahead for Europe's refiners	2-10	30
Industry's history of big ideas	2-17	32
U.K. parties differ on waste	2-24	38
BP to share process secret	3-3	39
Tight squeeze for Texaco's Erskine	3-10	27
Hole appears in tanker spill cover	3-17	30
Murphy breaks from U.K. R&M merger	3-24	26
Warning for OPEC LNG producers	3-31	30
R&D fear in cost-cutting era	4-7	36
Learn to listen to your reservoir	4-14	34
Russia to flood Europe with gas?	4-21	30
New niche for gas-to-liquids	4-28	42
Colombia to relax E&P license terms	5-5	60
Communicate for gain	5-12	35
Malaysia still beckons after 106 years	5-19	38
Get smarter by sharing ideas	5-26	32
BP joins Shell across invisible frontier	6-2	46
Cloud over Gulf as merger folds	6-9	27
U.K. a cash well for petroleum firms?	6-16	30
EU gas directive slows investment	6-23	22
Undercover agents at 'green' debate	6-30	38
Triton seeks second Colombian giant	7-7	28
Bangladesh is buzzing	7-14	31
India quietly joins gas-to-liquids race	7-21	36
Gas-to-liquids' rite of passage	7-28	35
IT industry's new millennium fears	8-4	31
A personal letter from Nigeria	8-11	33
How to deal with 'greens'	8-18	27
BP hits back at Greenpeace	8-25	40
U.K.'s radical transport plan	9-1	38
Cornering Asia's "sub-LNG" gas	9-8	37
Solar campaign at oil show	9-15	27
U.K. taxation green herring	9-22	36
Spreading demand for gas treatment	9-29	42
Oil company name for sale	10-6	35
U.K., Norway revive rigs-to-reefs ideas	10-13	38
Solar power's economic hurdle	10-20	43
LNG vs. GTL: taking the battle to sea	10-27	33
U.K.'s MMS ready to drill off Bulgaria	11-3	31
Engineers need 'rock-bashers'	11-10	41
Geological perils of deep water	11-17	30
Apache hunts gas for regulated markets	11-24	40
How to survive the merger battle	12-1	38
Lawyer and giant JV see India's allure	12-8	23
Exiting Myanmar	12-15	25
Prices in place for Thai privatization	12-22	29
Thai R&M fights currency crisis	12-29	23

COMPANIES

Alphabetical list PETROLEUM PRODUCTS MARKETING. Agip plans mobile gasoline stations for Russia	6-23	36
AIOC lets contract for full Caspian development work	8-25	42
OFFSHORE NORTHERN EUROPE. Aker develops new floating production concept for small fields	8-25	65
Alyeska to close two more TAPS pump stations	5-5	54
Alyeska reorganizing structure of TAPS operations	6-16	26
Amoco, Shell slate another TLP for eastern Gulf of Mexico	2-3	26
Amoco: Nile Delta world class gas play	2-24	37
Amoco opens drilling test facility to industry—R. V. Westermark and R. P. Bray	4-7	66
Amoco to refocus its U.S. upstream business	6-9	22
Amoco to boost Romanian gas output	7-7	27
Amoco, BG to develop Nile Delta gas	11-17	32
Anadarko logs more Algeria discoveries	1-27	31
Anadarko to probe Eritrea subsalt	10-6	35
Anadarko, Mobil form deep Hugoton alliance	12-1	40
ANR, Transco propose eastern U.S. gas line	3-3	30
Apache sharply expands western Egypt acreage position	2-10	63
Apache hunts gas for regulated markets—David Knott	11-24	40
ARCO produces first gas from Trent, Tyne fields	3-17	38
ARCO confirms giant Indonesian gas strike	9-15	30
ARCO orders two new-generation oil tankers	11-17	42
ARCO wins hot West of Shetland blocks	12-15	27
California's Benton seeks PSA in Jordan	8-18	29
Benton inks Senegal E&D MOU	12-22	27
BG to develop gas discoveries off Trinidad	4-14	24
BG to prune worldwide exploration and production portfolio	6-23	26
BG must accept gas transport charge cuts	6-23	26
Japanese firms join BG in India LNG scheme	8-11	32
BG/Agip to sell Texaco stake in Karachaganak	8-25	42
BG accepts Ofgas pricing formula	10-20	42
BHP wins Algerian license after oil strike	6-16	31
Black Sea Energy JV to explore new Tyumen block	11-3	30
Borealis expands polypropylene interests	2-3	35
BP lets contract to Statoil for Pierce FPSO design	1-20	24
BP to supply gas to Germany, Statoil to Ireland	2-10	26
BP/Statoil to upgrade Russian semi for Caspian prospect	1-20	32
BP discloses new West of Shetland strike	3-10	31
BP sets production growth targets	3-31	31
BP, Sonatrach land Algerian gas pact	5-5	58
BP tests offshore coiled tubing slim hole drilling	5-12	73
COMMENT: Positive action by industry needed on global climate change, BP says—John Browne	6-9	14
BP to expand solar energy technology, market share	6-9	18
ENERGY COMPANY SECURITY. BP molds security strategy to fit the country—David Knott	6-9	31
BP: surprising energy demand growth in '96	6-23	24
BP unveils Japanese pilot retail scheme	8-4	32
OGJ SPOTLIGHT: BP slates world-scale expansions at its Grangemouth complex—David Knott	8-18	15
OGJ SPOTLIGHT: BP cracks polymer recycling technique at Grangemouth	8-18	18
BP hits back at Greenpeace	8-25	40
BP proves diverless connection method in Foinaven	9-1	32
BP to expand olefins capacity in Southeast Asia	9-15	27
BP group starts up Troika field in Gulf of Mexico	11-17	44
British-Borneo hikes Morpeth reserves	2-24	36
British Gas to swap assets for voided contracts	1-20	26
British Gas marks end of restructuring	3-10	26
Cabre wins three Morocco permits	5-12	35
CanOxy acquires Libyan farmout from Bula	10-20	40
Centrica wins new deals for U.K. gas	12-15	22
Chauvco acquires three Gabon blocks	5-5	60
ASIA'S DOWNSTREAM EXPANSION. Chem Systems outlook for Asian petrochemicals	7-7	46
Chevron group short-lists companies for PNG-Australia line	9-22	30
Clarkson: Crude tanker outlook is bullish	8-4	26
OGJ SPOTLIGHT. CNG: Aiming to be an 'energy' company, not a gas company—Richard Wheatley	6-30	42
CNG unit makes three gas discoveries in Gulf of Mexico	11-17	28
Coastal lists Smackover, Sunniland objectives in gulf off Florida—G. Alan Petzet	9-29	109
Coastal wins nod on Victoria pipeline	11-17	38
MANAGEMENT PERSPECTIVE: India's Cochin Refineries slates gasified-resid cogen plant	10-20	33

	Date	Page
DOT: Colonial must improve safety	3-3	28
Columbia slates gas pipeline to Northeast U.S.	4-14	28
Conoco eyes novel floater for Banff field	3-3	31
Conoco gets nod to develop Viking satellites	4-7	37
Conoco, Pennzoil start up Louisiana lubes plant	4-21	27
NTSB urges Conoco shipping improvements	4-21	28
Conoco buys South Texas Lobo trend assets	6-9	25
MANAGEMENT PERSPECTIVE: Lessons for Conoco's experiences in Ecuador's rain forest—Robert Wasserstrom and Susan Reider	8-18	24
Dagestan offers Caspian exploration blocks	12-29	29
WORLD PIPELINE CONSTRUCTION. Distrigaz slates project spending tied to Interconnector	2-10	40
Dow, Shell plan Aussie petchem plant	10-20	34
Elf lets contracts for Elgin/Franklin jack-up platform	3-24	32
OGJ SPOTLIGHT. Elf aims to be major player in Europe's deregulated gas market	9-22	23
Engen unit signs major E&P deal with Gabon	2-3	31
Enron presses development work off India	4-14	25
Enron draws one, loses one in U.K. gas supply tiff	6-16	30
Enron awarded new onshore PSC in China	8-25	44
Esso Norge presses Jotun development work	3-31	35
Esso Rep targets Aquitaine basin prospects	6-16	73
Exxon, Santa Barbara County settle oil transport suits	1-13	25
Exxon, BP gauge deepwater Gulf of Mexico strike	3-17	32
FTC: Exxon to retract claims about octane	6-30	34
Fina, contractors settle in record wetlands penalty	3-3	28
Fina/Total's U.K. refinery starts up CHP project	5-5	58
GasAndes will flow by midyear—Warren R. True	4-21	61
WORLD PIPELINE CONSTRUCTION. Gazprom and Neste plan North European gas pipeline	2-10	38
Gazprom and Iran	11-10	42
Great Lakes schedules major system expansion—Patrick Crow	3-31	38
Red River play, Gulf Canada deal boost Williston basin	1-20	75
Hardman Resources obtains pact for exploration off Mauritania	2-3	64
Hindustan refinery to restart in 2 months	10-6	34
Hydro plans Oseberg-Statpipe gas line	1-13	30
Interconnector to cut gas prices, contracts?	6-2	38
IPC unit slates exploration in Libyan basin	1-13	30
IPC pressing development in Viet-Malay area	3-31	36
KN Energy to buy Oxy's MidCon unit	12-29	25
Lasmo steps up Pakistan search	1-27	31
Louis Dreyfus, Amex agree to seek merger	6-30	31
Asset management installed on Mapco system	3-31	72
Pipelaying under way for Marathon's deepwater gulf projects	9-1	25
Maxus sells power from Indonesian floater	11-24	36
Mesa, Parker & Parsley to merge into new firm	4-14	26
Mobil group to explore Peruvian blocks	4-7	38
Monterey Resources agrees to Texaco merger	8-25	38
NGC/Destec merger latest in BTU convergence—Richard Wheatley	2-24	42
SOUTH AMERICA REPORT. Oxy's strategy on environment, community issues key to success of project in Ecuador's rain forest—Bob Williams	4-21	44
ENERGY COMPANY SECURITY. Oxy claims Guerrilla threats behind local tribe's opposition to its Colombian exploration project	6-9	36
Oxy to get Elk Hills stake for $3.65 billion	10-13	35
PanEnergy slates two gas pipeline projects	3-31	38
Pdvsa readies third marginal fields round	6-2	30
Pdvsa launches first major organizational restructuring	7-28	40
Pdvsa completes study of Venezuela-Florida oil pipeline	8-25	37
Pemex launches massive Cantarell project	10-20	38
Pemex plans large program to expand Burgos basin gas output	11-10	89
Pemex lobbying against tariff cut proposal	12-1	34
Pennzoil settles pipeline spill suit	3-10	31
Perupetro scraps bids for blocks, slates new round	6-16	33
Petrobras slates $2 billion cogeneration scheme for refineries	6-9	26
PG&E to buy Valero's natural gas unit—Barbara Saunders	2-10	24
Phillips undertakes coalbed methane, petrochemical projects in China	1-20	31
Phillips group completes Bayu-Undan appraisal	2-10	64
Phillips, Seaway slate Midwest products line	2-17	28
Phillips eyes Texas-Arizona products line	5-5	56
Phillips begins output in Judy and Joanne fields	5-12	30
Phillips group exploring off South Africa	5-19	36
Phillips, Pdvsa ink coker, crude sale deal	9-1	40
Phillips finds oil in Bohai Bay	11-17	30
Pluspetrol slates drilling program in Peru	6-30	37
Poseidon pipeline expands in Gulf of Mexico	7-14	23
Premier takes a fresh look at old plays	3-24	34
Premier slates gas development off Indonesia	5-12	31
Reed: U.S. rig fleet indicators on the rise—Dean E. Gaddy	10-20	36
Repsol, Pluspetrol eye Latin American accord	2-3	35
OGJ SPOTLIGHT: Repsol fine-tuning international strategy for growth, repositioning	11-3	19
OGJ SPOTLIGHT: Repsol scores a record and a first with U.S. stock offering	11-3	25
Russia approves plan to privatize Rosneft	12-1	36
OGJ SPOTLIGHT. Royal Dutch/Shell reinventing itself as total energy company—David Knott	11-24	29
OGJ SPOTLIGHT. Royal Dutch/Shell forms development alliance with Gazprom	11-24	32
Salomon: '97 E&P looking strongest in 9 years	2-17	39
Saga discloses Norwegian Sea gas/condensate discovery	1-27	32
Salomon: '97 E&P looking strongest in 9 years	2-17	39
Santa Fe gets South China Sea, Beibu tracts	2-10	65
Santos groups build Cooper/Eromanga gas reserves	9-1	81
Santos adds gas discoveries in Australia	11-24	89
Santos expands Indonesian holdings	12-22	27
Scimitar slates two Mozambique wildcats	6-16	32
Seagull to develop Egyptian fields	7-7	30
Shell Expro unveils spar disposal plans	1-20	24
Shell France first French refiner in 12 years to cut capacity	2-17	26
Shell, Petronas to develop Sarawak gas	1-27	30
Shell targets electric power for unused gas	2-3	27
U.K., not Shell, pushed to dump Brent spar?	2-3	28
Shell Nigeria staff held as dispute turns ugly	3-31	31
Shell/Esso plans disposal of Fulmar loading buoy	3-31	36
Shell/Esso to use PES 'smart' well completion system	4-7	36
Shell advancing gulf deepwater developments—Guntis Moritis	4-28	26
Shell/Cairn deal to step up Bangladesh E&D	5-12	32
Shell, Mobil agree to combine California E&P	6-9	24
Shell receives Brent spar buoy disposal plans	6-16	30
Shell orders ultradeepwater semi for Gulf of Mexico work	7-7	30
Shell sees niche for new bitumen products	7-21	38
Shell/Esso lets Ketch platform contract	8-4	30
Shell to buy Gulf U.K. retail operations	9-1	40
Shell to acquire Tejas Gas Corp.	9-29	42
Shell reveals Brent spar safety analysis	10-27	34
Shell contracts pile swager for gulf platforms	11-17	28
Shell takes note of Brent spar views—David Knott	12-8	15
Shell sets up deepwater E&P division	12-29	24
Soekor nears completion of S. Africa's first oil field development	3-17	26
Sonatrach: Europe most dynamic gas market	9-15	28
Statoil building drillship, shuttle tankers	2-3	28
Statoil lets contract for giant gas semi	2-10	30
Statoil chief maps out strategy	2-24	32
Statoil opts for big riser base for Aasgard gas	3-3	32
Statoil slates first oil field development off Ireland	5-12	30
Statoil, Conoco dedicate giant Norwegian methanol plant	7-14	26
Statoil deals allow Chevron to return to Norway	7-21	35
Statoil results off Ireland not good	9-1	36
Suncor slates massive oilsands expansion	8-11	32
Syncrude gets nod for Aurora oilsands plan	11-3	28
Tennessee Gas joins U.S. Northeast gas pipeline fray	4-14	28
Texaco starts production in Captain field	3-24	30
Texaco plans Louisiana NGL system expansion	4-28	38
Texaco slates gulf-Midcontinent pipeline	6-30	34
Texaco explores near giant McKittrick field	10-20	85
FTC OKs Texaco/Shell/Aramco refining merger	12-29	24
Total group studying Orinoco megaproject	2-24	36
Total group may hike Bongkot outlays	2-24	37
Total group starts big 3D program in Thai gulf	7-21	94
Total's Iran deal sparks row with U.S.	10-6	31
TransCanada group gets Mexican pipeline nod	3-31	38
TransCanada slates major system expansion	5-19	39
TransCanada plans complicate Canada gas line picture	8-18	27
Triton to settle SEC's Indonesia bribery charges	3-10	27
Ultramar Diamond Shamrock acquiring Total NA	4-21	26
UMC signs PSC for large block in Bangladesh	3-17	34
Union Texas, Oman oil form exploration, development joint venture in Kazakhstan	5-26	88
Union Texas hopes to reproduce its Pakistan Badin experience—G. Alan Petzet	11-3	86
Unocal wins first round of CARB RFG patents war	11-3	33
Unocal plans major gas grid in South Asia	12-15	24
UPR slates big Colorado gas/helium project	4-14	29
UPR makes $4.2 billion offer for Pennzoil	6-30	30
USX, Ashland slate downstream combination	5-26	27
Wood Mackenzie: Angola the new hot spot	12-1	41
WoodMac: 1996 tops 1995 for NW Europe	2-24	35
WoodMac: NW Europe operators' drilling plans for 1997	2-24	35
WoodMac: SE Asia lines up 54 developments	9-15	31
WoodMac: Ireland's Atlantic Margin frontier promises success	11-17	31
Valero to acquire Basis Petroleum in downstream push	3-24	24
Vastar, British-Borneo slate deepwater Gulf of Mexico exploration	4-28	30
YPF/Amoco accord marks latest U.S. toehold by non-U.S. firm	9-1	26

	Date	Page
General News		
Automakers ready for NGV takeoff; is the oil and gas industry ready?—David Knott	1-20	20
Baltimore Gas, Potomac Electric merger wins nod	4-28	37
British Gas to swap assets for voided contracts	1-20	26
U.S. gas/electric megamergers may slow as new policies tested—Barbara Saunders	2-3	19
Gas firm/utility join to bundle energy, non-energy services	2-3	22
MANAGEMENT PERSPECTIVE. How petroleum firms can win battle for growth with vision engineering—Alasdair Mackintosh and Volker Schmidt	2-17	21
CAPITAL SPENDING OUTLOOK. U.S. companies' capital outlays to hit highest level since 1991—Robert J. Beck	2-17	34
CAPITAL SPENDING OUTLOOK. More E&P focus of U.S. companies' budgets—Richard Wheatley	2-17	36
NGC/Destec merger latest in BTU convergence—Richard Wheatley	2-24	42
U.S. E&P sector growth seen as robust in 1997	3-3	36
U.S. RESERVES REPLACEMENT—1: Why aren't more U.S. companies replacing oil and gas reserves?—Jerry Paul Brashear, Alan B. Becker, Michael L. Godec, and Peter M. Crawford	3-3	85
British Gas marks end of restructuring	3-10	26
U.S. RESERVES REPLACEMENT—2: How to overcome difficulties with reserves replacement—Jerry Paul Brashear, Alan B. Becker, Michael L. Godec, and Peter M. Crawford	3-10	75
FERC seeks to wrap up U.S. gas industry restructuring	3-24	20
BTU convergence action gathering momentum	3-24	27
MANAGEMENT PERSPECTIVE. How to identify the key elements of successful industry alliances—David Reamer	4-7	25
Crunch looms for U.S. service/supply sector—Richard Wheatley	4-7	28
U.S. M&A off to fast start in 1997	4-7	30
Mesa, Parker & Parsley to merge into new firm	4-14	26
Higher prices spark 1996 profits rise—Bob Beck and Laura Bell	4-14	34
North American gas firms chase partnerships to boost marketing—Barbara Saunders	4-21	19
Ultramar Diamond Shamrock acquiring Total NA	4-21	26
Conoco, Pennzoil start up Louisiana lubes plant	4-21	27
SOUTH AMERICA REPORT. Foreign petroleum companies developing new paradigm for operating in the rain forest region—Bob Williams	4-21	37
MANAGEMENT PERSPECTIVE: Internet's impact on the oil and gas industry: reality vs. hype—Stuart Diamond	4-28	23
Vastar, British-Borneo slate deepwater Gulf of Mexico exploration	4-28	30
Baltimore Gas, Potomac Electric merger wins nod	4-28	37
U.S. petroleum firms hit hard by Washington's unilateral sanctions—Patrick Crow	5-5	37
U.S.-Mexico gulf treaty pressures rising	5-12	34
Justice OKs majors' upstream R&D joint venture	5-12	37
USX, Ashland slate downstream combination	5-26	27
COMMENT: Positive action by industry needed on global climate change, BP says—John Browne	6-9	14
World gas industry indicators up in 1996	6-9	19
Ireland awards Rockall Trough licenses	6-16	32
UPR makes $4.2 billion offer for Pennzoil	6-30	30
Louis Dreyfus, Amex agree to seek merger	6-30	31
Global refining industry on verge of rebound—Leo Aalund	7-14	26
AGA: Gas industry adapting to rapid change	7-7	27
Access to future Venezuelan output secured	7-28	40
IT industry's new millennium fears—David Knott	8-4	31
CENTRAL ASIAN FSU. Caspian Sea projects advancing after Aliyev state visit to Washington	8-11	24
Pipeline spill drill tests industry's response capability	8-18	22
MANAGEMENT PERSPECTIVE: Oil firms in environmentally sensitive areas learning to balance stakeholder interests—Robert Wasserstrom and Susan Reider	8-18	23
Non-U.S. firms making their marks in sizzling Gulf of Mexico plays	9-1	23
YPF/Amoco accord marks latest U.S. toehold by non-U.S. firm	9-1	26
MANAGEMENT PERSPECTIVE: Can the E&P industry avoid future shock?—David Murphy, Chris Friedemann, and Ricardo Castro	9-8	23
Upstream operations generating cash flow, returns for oil/gas producers	9-8	28
Industry wants MMS to step up RIK pilot tests	9-8	32
OGJ200. OGJ200 scores solid financial, operating gains—Robert J. Beck and Laura Bell	9-8	43
OGJ200. Survey	9-8	50
OGJ200. State-owned companies of OGJ100 control big share of world's oil—Robert J. Beck and Marilyn Radler	9-8	62
OGJ100 Survey. Leading oil and gas companies outside the U.S.	9-8	64
OGJ200 company index	9-8	70
Second group eyes gas-to-liquid membrane process	9-15	27
Kansas gas producers facing huge payback	9-22	33
E&P sector spending still gaining momentum	9-22	38
Shell to acquire Tejas Gas Corp.	9-29	42
COMMENT: Trans-Caucasus transport agreement is needed to solve Caspian problem—M. G. Melconian	10-13	28
Canada, U.S. M&A action at blistering pace	10-27	36
E&D outlays, revenues hit 5-year high in '96	10-27	39
MANAGING INTEGRATED OIL & GAS COMPANIES. A PRIMER ON EXPLORING ABROAD—PART I: Strategic choices crucial to foreign upstream ventures—Richard A. Wasteneys	11-10	49
MANAGEMENT PERSPECTIVE: How oil firms can control runaway enterprise-wide software systems—Stuart Diamond	11-17	25
Amoco, BG to develop Nile Delta gas	11-17	32
IPAA focuses on emerging technologies, IT innovations—Anne Rhodes	11-24	38
IPAA: U.S. oil, gas outlook positive in 1998—Bob Beck	11-24	38
FSU megadeal action suddenly heating up—David Knott	11-24	42
Two major deals highlight U.S. M&A activity	12-1	36
Anadarko, Mobil form deep Hugoton alliance	12-1	40
Finland details state energy firms' merger	12-29	23
FTC OKs Texaco/Shell/Aramco refining merger	12-29	24
KN Energy to buy Oxy's MidCon unit	12-29	25
Independents eye Ukrainian E&D project	12-29	26
FORECASTS, TRENDS, STATISTICS, SURVEYS		
U.S. refiners must piece together RFG, pollution control puzzle—Barbara Saunders	1-6	18
1996: THE YEAR IN REVIEW. High oil and gas prices, fundamental change mark global energy industry scene in 1996—John Kennedy	1-6	30
API sees signs U.S. production slide slowing	1-20	33
FORECAST AND REVIEW. U.S. oil, natural gas demand still climbing—Robert J. Beck	1-27	45
FORECAST AND REVIEW. Non-OPEC oil supply to outpace demand gains in 1997—Robert J. Beck	1-27	62
FORECAST AND REVIEW: Revenue surge to sustain drilling in U.S. and Canada—Robert J. Beck and G. Alan Petzet	1-27	66
EIA: Change still driving U.S. gas markets	2-3	23
API: Futures markets poor forecasters of energy prices	2-10	23
CAPITAL SPENDING OUTLOOK. U.S. companies' capital outlays to hit highest level since 1991—Robert J. Beck	2-17	34
CAPITAL SPENDING OUTLOOK. More E&P focus of U.S. companies' budgets—Richard Wheatley	2-17	36
CAPITAL SPENDING OUTLOOK. Salomon: '97 E&P looking strongest in 9 years	2-17	39
NATURAL GAS IN THE MIDDLE EAST. Gas projects surge in the Middle East as governments seek new revenue sources—Michael D. Williams	2-24	54
Despite upturn, memories of oil crash restrain optimism	3-3	35
U.S. E&P sector growth seen as robust in 1997	3-3	36
HOW ARE STRATEGIC ALLIANCES WORKING? Strategic alliance, multidisciplinary teamwork enhanced field development in Cotton Valley trend—Holly G. Krus, Ken Haley, Larry Britt, Ronald H. Benson, Kevin W. England, Ron Holt, Nicholas C. Piskurich, and Robert A. Woodroof	3-31	43
HOW ARE STRATEGIC ALLIANCES WORKING? Partners assume risks, lower finance costs of delayed coker-cogeneration project in Chile—Enrique Davila Alveal and Martin J. Karpenski	3-31	55
HOW ARE STRATEGIC ALLIANCES WORKING? Strategic alliances fit pattern of industry innovation—James G. Crump	3-31	59
RESERVES GROWTH: GEOLOGY, TECHNOLOGY, AND ECONOMICS. Fixed view of resource limits creates undue pessimism—M. A. Adelman and Michael C. Lynch.	4-7	56
U.S. gas resource estimate up 6% in 2 years	4-21	23
EIA: crude oil, gasoline prices to dip in 1997	4-21	24
SOUTH AMERICA REPORT. Foreign petroleum companies developing new paradigm for operating in the rain forest region—Bob Williams	4-21	37
SOUTH AMERICA REPORT. Oxy's strategy on environment, community issues key to success of project in Ecuador's rain forest—Bob Williams	4-21	44
FOCUS: REFINING. State of European refining industry is less bleak than reported—John H. Jenkins	4-28	49
FOCUS: EXPLORATION. Government takes decline as nations diversify terms to attract investment—A. Pedro Van Meurs and Andrew Seck	5-26	35
More data needed to support or disprove global warming theory	5-26	75
India's oil supply deficit spurs reforms to lure foreign capital—Mohan Malhotra	6-2	25
World gas industry indicators up in 1996	6-9	19
ENERGY COMPANY SECURITY. BP molds security strategy to fit the country—David Knott	6-9	31
ENERGY COMPANY SECURITY. An expatriate's guide to personal residence security—C. N. Weller Jr.	6-9	34
ENERGY COMPANY SECURITY. Oxy claims Guerrilla threats behind local tribe's opposition to its Colombian exploration project	6-9	36

	Date	Page
Andersen: U.S. upstream markers mixed in '96	7-21	40
Sub-Saharan Africa energy future brightening—John L. Kennedy	7-28	31
MIDYEAR FORECAST. Non-OPEC supply to test OPEC's quota resolve in second half—Robert J. Beck	7-28	45
MIDYEAR FORECAST. Oil & Gas Journal well forecast for 1997	7-28	65
International sanctions intertwined in foreign policy	8-11	20
THE CHANGING ENERGY MIX. Natural gas central to world's future energy mix—Margaret M. Carson	8-11	37
THE CHANGING ENERGY MIX. Renewable energy has political support, room to grow	8-11	48
THE CHANGING ENERGY MIX. Gas receives new priority in Abu Dhabi's onshore work—Bob Tippee	8-11	51
RUSSIA REPORT. Incomplete privatization mixes ownership of Russia's oil industry—Eugene M. Khartukov	8-18	36
MANAGEMENT PERSPECTIVE: Can the E&P industry avoid future shock?—David Murphy, Chris Friedemann, and Ricardo Castro	9-8	23
OGJ200. OGJ200 scores solid financial, operating gains—Robert J. Beck and Laura Bell	9-8	43
OGJ200. Survey	9-8	50
OGJ200. State-owned companies of OGJ100 control big share of world's oil—Robert J. Beck and Marilyn Radler	9-8	62
OGJ100 Survey. Leading oil and gas companies outside the U.S.	9-8	64
OGJ200 company index	9-8	70
GRI: U.S. gas markets to continue to grow	9-22	32
Price/demand strength buoys 1st half profits—Robert J. Beck and Laura Bell	9-29	52
MANAGEMENT PERSPECTIVE: Incentives needed to expand India's oil transportation infrastructure—Mohan Malhotra	10-27	27
E&D outlays, revenues hit 5-year high in '96	10-27	39
MANAGING INTEGRATED OIL & GAS COMPANIES. U.S. refiners urged to capture, defend prosperity—Jim Marcum	11-10	57
MANAGING INTEGRATED OIL & GAS COMPANIES. Strategic approach needed for oil company recruitment—John A. Griffin	11-10	64
IEA: Oil's role in power generation fading	11-17	36
MANAGING INDEPENDENT OIL & GAS COMPANIES. Long reserves lives sustain prospects for independents in the U.S. Lower 48—David B. Hatcher and Arlon R. Tussing	11-17	49
IPAA: U.S. oil, gas outlook positive in 1998—Bob Beck	11-24	38
Mother Nature's gift to forecasters—Robert J. Beck	12-29	15

IMPORTS AND EXPORTS

Qatar projects win Ex-Im Bank support	1-27	30
High prices boosted 9-month profits in 1996—Robert J. Beck and Laura Bell	1-27	40
U.S. LNG imports 1996-1997 should recover from low 1995 levels—Edward J. Swain	1-27	84
Iraqi crude oil exports swell OPEC production volume	2-24	34
NEB fields bids for 1 tcf of Canadian gas	3-10	28
Asia's product imports at a low	3-17	30
Iraqi oil exports swell OPEC output	3-31	30
EPA eyes changes for RFG imports	5-12	36
API: U.S. oil imports still on the rise	5-26	26
Oman marks progress on LNG export project	6-2	34
Canada's petroleum output set records in 1996	6-9	24
Egypt eyeing Mediterranean gas export	6-23	21
Pakistan chooses Beicip to study its gas import prospects	8-4	25
ARCO confirms giant Indonesian gas strike	9-15	30
China's deregulation, expansion not enough to restore market balance—Haijiang Henry Wang	9-29	33
China's new petroleum structure continues to evolve under reform	10-6	23
EIA: LNG trade entering expansion period	10-27	30
Price a hurdle for Egyptian gas exports	12-22	28

MARKETING AND PRICES (General)

Why energy futures markets merit support amid latest controversy—Edward N. Krapels	2-10	21
API: Futures markets poor forecasters of energy prices	2-10	23
IPAA: MMS relents on royalty valuation rule proposal	5-26	26
PETROLEUM PRODUCTS MARKETING. European retailers scramble for market share in former Communist bloc—David Knott	6-23	35
PETROLEUM PRODUCTS MARKETING. Agip plans mobile gasoline stations for Russia	6-23	36
PETROLEUM PRODUCTS MARKETING. PMAA: U.S. petroleum marketers facing dramatic change—Phillip R. Chisholm	6-23	40
PETROLEUM PRODUCTS MARKETING. PMAA: U.S. marketers marking progress on UST compliance	6-23	43
PETROLEUM PRODUCTS MARKETING: California marketers face new onslaught of RFG criticism—Barbara Saunders	6-23	47
Andersen: U.S. upstream markers mixed in '96	7-21	40
The shrinking role of price	7-28	23
EIA: U.S. propane price hikes market-driven	8-11	27
MMS lists options for royalty rule changes	9-29	44
Price/demand strength buoys 1st half profits—Robert J. Beck and Laura Bell	9-29	52
Global warming costs, benefits debated	10-6	36
MANAGEMENT PERSPECTIVE: Indian refiner/marketers must adapt to changes with deregulation—Michael Wilcox	10-20	31

Crude and Refined Products

EIA: Oil prices to slip to about $21/bbl	1-27	40
High prices boosted 9-month profits in 1996—Robert J. Beck and Laura Bell	1-27	40
CGES: First quarter tight, but $16/bbl oil price looms	2-16	27
Oil price slide worsens as glut fear grows	2-24	34
OPEC oil price could plunge to $15/bbl in 1997	3-17	30
Mixed outlook for Middle East gas projects	3-24	28
Higher prices spark 1996 profits rise—Bob Beck and Laura Bell	4-14	34
EIA: crude oil, gasoline prices to dip in 1997	4-21	24
India defers action on petroleum product price hikes	6-2	27
Canada's petroleum output set records in 1996	6-9	24
CGES foresees stable oil price to yearend	6-23	24
House panel endorses another SPR sale	6-23	26
Higher prices boost revenues, net income—Robert Beck and Laura Bell	6-23	30
Shell sees niche for new bitumen products	7-21	38
API: U.S. oil demand up, oil output down	8-18	21
U.S. gasoline demand rising	8-18	21
DRILLING REPORT. Rising oil demand, not oil price, increases drilling activity—C. Russell Luigs	9-22	56
GM's gasoline tax	10-27	25
U.S. petroleum products stocks hit record level in September	11-3	32
OPEC quota hike triggers oil price drop	12-8	21
API: U.S. oil inventories at 3-year high	12-22	25

Natural Gas

Automakers ready for NGV takeoff; is the oil and gas industry ready?—David Knott	1-20	20
EIA: CNG, propane dominate U.S. alternate-fueled fleet	1-20	22
High prices boosted 9-month profits in 1996—Robert J. Beck and Laura Bell	1-27	40
EIA: Change still driving U.S. gas markets	2-3	23
Volatility to rule olefins, styrene markets to 2001	3-17	39
BTU convergence action gathering momentum	3-24	27
Higher prices spark 1996 profits rise—Bob Beck and Laura Bell	4-14	34
North American gas firms chase partnerships to boost marketing—Barbara Saunders	4-21	19
U.S. gas resource estimate up 6% in 2 years	4-21	23
EIA: crude oil, gasoline prices to dip in 1997	4-21	24
Interconnector to cut gas prices, contracts?	6-2	38
NGSA: Flawed power restructuring could crimp gas demand	6-2	42
U.S. oil and gas finding, development costs dropping	6-9	22
API: U.S. gasoline costs in '96 still low	6-23	27
Higher prices boost revenues, net income—Robert Beck and Laura Bell	6-23	30
Ingaa: U.S. gas marketers' role on the increase	6-23	32
OGJ SPOTLIGHT. CNG: Aiming to be an 'energy' company, not a gas company—Richard Wheatley	6-30	42
Canadian gas gaining U.S. market share	7-21	30
EIA sees demand for U.S. natural gas on the increase	7-21	32
Natural gas surplus may be ahead in Thailand	7-21	32
EC to fund studies of Europe's energy grids	8-4	29
More U.K. gas markets slated to open Nov. 1	9-8	38
Second group eyes gas-to-liquid membrane process	9-15	27
Sonatrach: Europe most dynamic gas market	9-15	28
Gas hydrates to boost India's gas resource	9-15	28
OGJ SPOTLIGHT. Elf aims to be major player in Europe's deregulated gas market	9-22	23
GRI: U.S. gas markets to continue to grow	9-22	32
BG accepts Ofgas pricing formula	10-20	42
Ingaa: Coal problems mean opportunities for natural gas	11-17	38
COMMENT—Mixed signals in Mexican gas markets: Long-term competition benefits delayed—George Baker	12-8	28
Iraq reluctantly accepts renewed U.N. deal	12-15	21
EU agrees to diluted gas directive	12-15	22
Price a hurdle for Egyptian gas exports	12-22	28

POLLUTION AND ENVIRONMENTAL CONTROL

Sea Empress oil spill response questioned	1-27	34
TRI E&P exclusion tops IPAA agenda	3-3	26
Pennzoil settles pipeline spill suit	3-10	31
Major overcapacity woes loom for oxygenates despite rising demand—Barbara Saunders	3-31	21
MTBE faces a new round of political skirmishes in the U.S.—Barbara Saunders	3-31	22
Vehicle fleet growth to sustain oil demand—Bob Tippee	3-31	28

	Date	Page
Greenpeace bids for U.K. frontier acreage	3-31	35
EPA proposes changes to U.S. RFG program	4-7	32
BLM survey finds Alyeska's woes continue	4-7	32
SOUTH AMERICA REPORT. Foreign petroleum companies developing new paradigm for operating in the rain forest region—Bob Williams	4-21	37
SOUTH AMERICA REPORT. Oxy's strategy on environment, community issues key to success of project in Ecuador's rain forest—Bob Williams	4-21	44
SOUTH AMERICA REPORT. Managing nontechnical risks associated with seismic operations in the tropical rain forests of Ecuador—Gary Barker, Gordon R. Smith, Francisco J. Vacas, Evan K. Swingholm, Richard M. Yuill, and Miguel A. Aleman	4-21	50
EPA eyes changes for RFG imports	5-12	36
API: Industry environment outlays top EPA's	6-2	44
COMMENT: Positive action by industry needed on global climate change, BP says—John Browne	6-9	14
IEA energy ministers formulating stance on climate change	6-9	16
PETROLEUM PRODUCTS MARKETING. PMAA: U.S. marketers marking progress on UST compliance	6-23	43
OTAG submits ozone recommendations to EPA	6-30	32
'Green' issues once again top industry agenda	6-30	38
Cleanup continues on downgraded Japan spill	7-14	25
Greenhouse price tag	7-28	36
U.K. presses charges over oil spill	7-28	38
Pipeline spill drill tests industry's response capability	8-18	22
MANAGEMENT PERSPECTIVE: Oil firms in environmentally sensitive areas learning to balance stakeholder interests—Robert Wasserstrom and Susan Reider	8-18	23
MANAGEMENT PERSPECTIVE: Lessons for Conoco's experiences in Ecuador's rain forest—Robert Wasserstrom and Susan Reider	8-18	24
How to deal with 'greens'—David Knott	8-18	27
EPA's air rule looks safe	8-25	27
Wingas starts work on Yamal gas link	8-25	36
BP hits back at Greenpeace	8-25	40
New U.S. ozone standards will boost NOx control market	9-8	88
Solar campaign at oil show—David Knott	9-15	27
Environmental justice	9-22	21
Global warming costs, benefits debated	10-6	36
Global warming push begins	10-13	25
Groups skewer Clinton's global warming plan—Patrick Crow	10-27	36
Eco-bunglers target oil personnel—David Knott	11-3	15
Ingaa: Coal problems mean opportunities for natural gas	11-17	38
Industrialized, developing nations clash at Kyoto climate change talks—Patrick Crow	12-1	29
EC to boost CHP schemes to cut greenhouse gas emissions	12-1	34
Clinton's surprise for Kyoto hints of climate change policy shift	12-8	18
Media center: U.S. TV news biased on global warming issue	12-8	20
Kyoto conference yields treaty U.S. Congress likely to reject	12-15	17
U.S., Japan, Norway to study long-term CO_2 disposal options	12-15	18
Colder weather in 1996 boosted U.S. greenhouse gas emissions	12-15	20
Kyoto aftermath: Big battles still ahead as U.S. holds treaty key	12-22	17
GRI sees natural gas as a key to reining greenhouse gas emissions	12-22	22
California senators targeting MTBE use in the state	12-22	25
EPA issues drinking water advisory on MTBE	12-22	25
Cost of the Clean Air Act	12-29	17
SOx control additive reduces emissions, saving capital investments—John S. Becker, Mark J. LaCour, Steven W. Davey, and John T. Haley	12-29	76
RELATED ENERGIES (General)		
MMS lists options for royalty rule changes	9-29	44
Alternate fuels fleet expanding	10-20	43
Coal		
Powder River coalbed methane output growing fast—G. Alan Petzet	3-10	79
Synthetic fuels aiding South Africa to advance its world energy role—David Knott	3-17	23
Monument jeopardizes area of Utah's resources—G. Alan Petzet	3-24	69
Ingaa: Coal problems mean opportunities for natural gas	11-17	38
Electricity		
U.S. gas/electric megamergers may slow as new policies tested—Barbara Saunders	2-3	19
Gas firm/utility join to bundle energy, non-energy services	2-3	22
Shell targets electric power for unused gas	2-3	27
PG&E to buy Valero's natural gas unit—Barbara Saunders	2-10	24
U.S. electricity decontrol tops energy agenda for 105th Congress—Patrick Crow	3-24	19
BTU convergence action gathering momentum	3-24	27
Producers seek fairness in power decontrol	6-2	42
New FERC chief Hoecker plans to keep electric industry restructuring on track	6-30	32
OGJ SPOTLIGHT. CNG: Aiming to be an 'energy' company, not a gas company—Richard Wheatley	6-30	42
EC to fund studies of Europe's energy grids	8-4	29
EIA: deregulation could cut power costs	9-1	37
GRI: U.S. gas markets to continue to grow	9-22	32
Finland presses merger of state energy firms	10-13	35
Alternate fuels fleet expanding	10-20	43
IEA: Oil's role in power generation fading	11-17	36
U.K. eyes 10% renewables power share	11-24	36
EC to boost CHP schemes to cut greenhouse gas emissions	12-1	34
Shale		
DOE pressing disposition of western assets	4-21	24
Solar		
BP to expand solar energy technology, market share	6-9	18
THE CHANGING ENERGY MIX. Renewable energy has political support, room to grow	8-11	48
Solar power's economic hurdle—David Knott	10-20	43
Tar Sands, Oil Sands		
Investment incentives driving Canadian oilsands activity	6-9	25
Suncor slates massive oilsands expansion	8-11	32
Canada's oilsands activity percolating	10-13	40
Syncrude gets nod for Aurora oilsands plan	11-3	28
More projects join Canada's oilsands fray	12-8	22
SUPPLY AND DEMAND		
SPR raids signaling demise of U.S. emergency oil stockpile?—Patrick Crow	1-13	20
Ethylene consumption seen doubling by 2015	1-13	31
FORECAST AND REVIEW. U.S. oil, natural gas demand still climbing—Robert J. Beck	1-27	45
FORECAST AND REVIEW. Non-OPEC oil supply to outpace demand gains in 1997—Robert J. Beck	1-27	62
Canada supplies U.S. record 2.8 tcf of gas in 1995	2-3	24
U.S. gas production to meet '97 demand	2-3	24
CGES: First quarter tight, but $16/bbl oil price looms	2-16	27
Booming oil/gas demand, limited potential push TPAO abroad—John Kennedy	2-24	29
Oil supply, demand surge continued in 1996	3-3	34
Major overcapacity woes loom for oxygenates despite rising demand—Barbara Saunders	3-31	21
Vehicle fleet growth to sustain oil demand—Bob Tippee	3-31	28
Warm weather hits February demand	3-31	39
More E&D seen off Canada's eastern coast	5-19	30
Non-OPEC offshore output challenging OPEC	5-19	31
EIA: Renewables' share of U.S. energy mix rises	5-26	25
India's oil supply deficit spurs reforms to lure foreign capital—Mohan Malhotra	6-2	25
NGSA: Flawed power restructuring could crimp gas demand	6-2	42
North American gas supply, demand changing	6-9	21
BP: surprising energy demand growth in '96	6-23	24
U.S. gasoline production hits record high	6-23	30
LNG scheme proposed in British Columbia	7-7	26
Global refining industry on verge of rebound—Leo Aalund	7-14	26
EIA sees demand for U.S. natural gas on the increase	7-21	32
Natural gas surplus may be ahead in Thailand	7-21	32
Thailand's petrochemical demand grows; two plants proposed	7-21	34
MIDYEAR FORECAST. Non-OPEC supply to test OPEC's quota resolve in second half—Robert J. Beck	7-28	45
API: First half U.S. oil supply exceeds demand	8-11	26
Global petrochemical markets to get tougher	8-11	28
THE CHANGING ENERGY MIX. Natural gas central to world's future energy mix—Margaret M. Carson	8-11	37
API: U.S. oil demand up, oil output down	8-18	21
U.S. gasoline demand rising	8-18	21
Canadian natural gas export pipeline race heating up	8-25	29
More U.K. gas markets slated to open Nov. 1	9-8	38
Rising LNG/LPG use to expand carrier fleets	9-22	26
Gas to pace Aussie energy demand growth	9-22	29
DRILLING REPORT. Rising oil demand, not oil price, increases drilling activity—C. Russell Luigs	9-22	56
DRILLING REPORT. Onshore rig surplus diminishes as demand rises—Eugene M. Isenberg	9-22	62
China's deregulation, expansion not enough to restore market balance—Haijiang Henry Wang	9-29	33
Spreading demand for gas treatment—David Knott	9-29	42
Price/demand strength buoys 1st half profits—Robert J. Beck and Laura Bell	9-29	52
All U.S. gas indicators up	10-6	37
MANAGEMENT PERSPECTIVE: Indian refiner/marketers must adapt to changes with deregulation—Michael Wilcox	10-20	31
MANAGEMENT PERSPECTIVE: Incentives needed to expand India's oil transportation infrastructure—Mohan Malhotra	10-27	27
U.S. petroleum products stocks hit record level in September	11-3	32

	Date	Page
Concrete deemed best option for LNG floater hull	11-10	37
IEA: Oil's role in power generation fading	11-17	36
IPAA focuses on emerging technologies, IT innovations—Anne Rhodes	11-24	38
IPAA: U.S. oil, gas outlook positive in 1998—Bob Beck	11-24	38
FOCUS: EXPLORATION. New Zealand's Canterbury basin prospects reviewed in a continental Gondwana setting—Tom Haskell and Ian Wylie	12-15	57
Where future Canadian gas supply will originate—Robert A. Meneley	12-15	67
Peña asks NPC for gas, refined products studies	12-22	26
Price a hurdle for Egyptian gas exports	12-22	28
Ukraine steps up efforts to boost gas output, upgrade gas grid	12-29	26
Research targets lower gas-processing operating costs—Howard S. Meyer and Dennis Leppin	12-29	83

GOVERNMENT

CONGRESS

CONGRESS U.S. electricity decontrol tops energy agenda for 105th Congress—Patrick Crow	3-24	19
Key congressman targets repeal of ethanol tax credit	3-24	22
MTBE faces a new round of political skirmishes in the U.S.—Barbara Saunders	3-31	22
DOE pressing disposition of western assets	4-21	24
Producers seek fairness in power decontrol	6-2	42
Greenhouse price tag	7-28	36
CENTRAL ASIAN FSU. Caspian Sea projects advancing after Aliyev state visit to Washington	8-11	24
COMMENT: Risks to global crude oil flow sustain need for strategic reserve—Lawrence J. Goldstein	9-15	20
Fast track and trade	9-29	31
Global warming costs, benefits debated	10-6	36
Gore becomes pro-oil—Patrick Crow	10-6	37
Global warming push begins	10-13	25
Sanctions showdown—Patrick Crow	10-13	34
U.S. trade inconsistency	10-20	29
Groups skewer Clinton's global warming plan—Patrick Crow	10-27	36
Washington briefs—Patrick Crow	12-1	32
Clinton's surprise for Kyoto hints of climate change policy shift	12-8	18
Kyoto conference yields treaty U.S. Congress likely to reject	12-15	17
Producing states continue devolvement push	12-22	24
California senators targeting MTBE use in the state	12-22	25
Peña asks NPC for gas, refined products studies	12-22	26

COURTS

Supreme Court backs LDC gas tax exemption	2-24	41
Fina, contractors settle in record wetlands penalty	3-3	28
UPR makes $4.2 billion offer for Pennzoil	6-30	30
Utah sues U.S. government over trust lands	7-7	29
Well frac regs loom—Patrick Crow	9-15	25

DEPARTMENT OF COMMERCE

Pragmatism underscores offshore conference	4-28	34
House panel endorses another SPR sale	6-23	26
Elk Hills ready for new horizontal drilling chapter	12-15	71

DEPARTMENT OF ENERGY

SPR raids signaling demise of U.S. emergency oil stockpile?—Patrick Crow	1-13	20
U.S. DOE continues to pursue sale of Elk Hills oil field	1-13	22
Iogcc survey: U.S. idle wells up by a third	3-10	36
FERC has two empty slots now with Moler moving to DOE post	4-21	23
DOE pressing disposition of western assets	4-21	24
DOE seeks input on SPR's future	5-5	62
DOE launches Elk Hills sale bid process	5-26	24
DOE plans gas-to-liquids conventional transportation project	6-23	20
COMMENT: Risks to global crude oil flow sustain need for strategic reserve—Lawrence J. Goldstein	9-15	20
Oxy to get Elk Hills stake for $3.65 billion	10-13	35
DOE awards drilling systems research grants	11-17	34
IPAA focuses on emerging technologies, IT innovations—Anne Rhodes	11-24	38
U.S., Japan, Norway to study long-term CO_2 disposal options	12-15	18

DEPARTMENT OF INTERIOR

MMS royalty rule to cut reliance on posted prices	1-27	36
FOCUS: EXPLORATION. Rocky Mountain federal lands pose widespread access issues—Patrick Crow	2-3	42
MMS slates sale for central gulf	2-10	28
New web site updates U.S. environmental regulations weekly	2-10	60
Central gulf OCS Sale 166 another sizzler	3-10	30
Independents set the bidding pace during Gulf of Mexico lease Sale 166—Patrick Crow	3-17	34
MMS lease sale to offer Cook Inlet tracts	4-28	36
MMS rule to allow federal royalty delegation to states	5-5	50
MMS withdraws royalty valuation rule change	5-5	50
MMS panel urges environmental studies of moratorium areas	5-12	34
U.S.-Mexico gulf treaty pressures rising	5-12	34
IPAA: MMS relents on royalty valuation rule proposal	5-26	26
Royalty valuation rule changes loom—Patrick Crow	6-30	25
MMS royalty valuation on gas also difficult issue to resolve	6-30	26
The MMS royalty proposal	7-14	17
Eco-credits—Patrick Crow	7-21	35
MMS reviewing Destin Dome project	8-25	38
Overregulating G&G data	9-1	21
Deep water focus of latest record gulf sale	9-1	30
MMS issues—Pat Crow	9-1	36
Industry wants MMS to step up RIK pilot tests	9-8	32
Rig concerns don't stem gulf sale confidence	9-8	36
MMS rethinks royalty plan	9-15	19
MMS seeks more input on royalty rule alternatives	9-15	25
BLM eyeing NPR-A leasing	12-8	34
U.S. independents unaware of set-aside rule	12-15	28
Interior's 32¢ appeals—Patrick Crow	12-29	

DEPARTMENT OF JUSTICE

Justice OKs majors' upstream R&D joint venture	5-12	37

EXECUTIVE BRANCH

U.S. petroleum firms hit hard by Washington's unilateral sanctions—Patrick Crow	5-5	37
U.S. economic sanctions cloud Myanmar E&D action	5-5	38

FEDERAL ENERGY REGULATORY COMMISSION (FERC)

New FERC rules to boost utility competitiveness	1-6	26
New regs seen altering gas buyers' habits	2-24	40
FERC upholds key rulings in flurry of action	3-10	28
FERC seeks to wrap up U.S. gas industry restructuring	3-24	20
FERC asked to solve GRI funding woes	3-31	39
FERC has two empty slots now with Moler moving to DOE post	4-21	23
Baltimore Gas, Potomac Electric merger wins nod	4-28	37
FERC extends GRI funding method just 1 year	5-12	37
New FERC chief Hoecker plans to keep electric industry restructuring on track	6-30	32
Kansas gas producers facing huge payback	9-22	33

FEDERAL TRADE COMMISSION (FTC)

FTC OKs Texaco/Shell/Aramco refining merger	12-29	24

TAXATION

Supreme Court backs LDC gas tax exemption	2-24	41
Key congressman targets repeal of ethanol tax credit	3-24	22
U.K. utilities hit by 'windfall' taxation plan	7-14	27
GM's gasoline tax	10-27	25
MANAGING INDEPENDENT OIL & GAS COMPANIES. Attention to state, local taxes can save producers money—Robert K. Eggett	11-17	68

ORGANIZATIONS

AMERICAN GAS ASSOCIATION (AGA)

AGA: Gas industry adapting to rapid change	7-7	27
Gas to pace Aussie energy demand growth	9-22	29

AMERICAN PETROLEUM INSTITUTE (API)

API sees signs U.S. production slide slowing	1-20	33
API: Futures markets poor forecasters of energy prices	2-10	23
Warm weather hits February demand	3-31	39
API: MMS relents on royalty valuation rule proposal	5-26	26
API: Industry environment outlays top EPA's	6-2	44
API: U.S. gasoline costs in '96 still low	6-23	27
U.S. gasoline production hits record high	6-23	30
API: First half U.S. oil supply exceeds demand	8-11	26
API: U.S. oil demand up, oil output down	8-18	21
DiBona to retire—Patrick Crow	9-22	34
U.S. refiners set more records	9-22	34
New API president plans to improve teamwork	11-10	44
DiBona urges consolidation of Washington oil associations	11-10	44
MANAGING INDEPENDENT OIL & GAS COMPANIES. Underestimation characterizes estimation of oil reserves	11-17	58
U.S. completions climb 5% two quarters in a row	12-15	29
Red's straw poll—Patrick Crow	12-15	29
API: U.S. oil inventories at 3-year high	12-22	25

	Date	Page
GAS RESEARCH INSTITUTE (GRI)		
GRI sees natural gas as a key to reining greenhouse gas emissions	12-22	22
INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA (IPAA)		
TRI E&P exclusion tops IPAA agenda	3-3	26
IPAA focuses on emerging technologies, IT innovations—Anne Rhodes	11-24	38
IPAA: U.S. oil, gas outlook positive in 1998—Bob Beck	11-24	38
INTERNATIONAL ENERGY AGENCY (IEA)		
IEA sounds alarm about strategic reserves sales	7-28	35
INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA (INGAA)		
Ingaa: U.S. gas marketers' role on the increase	6-23	32
INTERSTATE OIL AND GAS COMPACT COMMISSION (IOGCC)		
Iogcc survey: U.S. idle wells up by a third	3-10	36
Iogcc: U.S. oil and gas R&D threat looming	5-19	38
Producing states continue devolvement push	12-22	24
NATIONAL PETROLEUM COUNCIL (NPC)		
Peña asks NPC for gas, refined products studies	12-22	26
OFFSHORE TECHNOLOGY CONFERENCE (OTC)		
1997 OTC highlights 50 years of offshore technological progress—Richard Wheatley and Barbara Saunders	5-12	22
OTC technical program underscores technological advances offshore—Dean E. Gaddy, Gunits Moritis, and Warren R. True	5-19	25
ORGANIZATION OF PETROLEUM EXPORTING COUNTRIES (OPEC)		
Iraqi crude oil exports swell OPEC production volume	2-24	34
OPEC oil price could plunge to $15/bbl in 1997	3-17	30
Iraqi oil exports swell OPEC output	3-31	30
Non-OPEC offshore output challenging OPEC	5-19	31
CGES foresees stable oil price to yearend	6-23	24
OPEC rolls over output, quotas, vows restraint	7-7	28
OPEC quota hike triggers oil price drop	12-8	21
OXYGENATED FUELS ASSOCIATION (OFA)		
Oxygenates seen working as intended in U.S.	8-11	31
PETROLEUM MARKETERS ASSOCIATION OF AMERICA (PMAA)		
PETROLEUM PRODUCTS MARKETING. PMAA: U.S. petroleum marketers facing dramatic change—Phillip R. Chisholm	6-23	40
PETROLEUM PRODUCTS MARKETING. PMAA: U.S. marketers marking progress on UST compliance	6-23	43

CONTRIBUTING AUTHORS

A

	Date	Page
AALUND, L. R. (Journal Staff)		
Globally correct	3-24	15
Vinland and Hispaniola	5-5	33
Global refining industry on verge of rebound	7-14	26
Finally	7-21	19
Speech skills	9-29	29
From Arkansas to Bourbon Street	10-6	19
Quick learners	11-10	25
Saved from obscurity	12-1	25
ABAYARATHNA, DHARMA, and KANE, RICHARD D. (CLI International Inc.); SANDERS, DAVID H. (Texaco North Sea U.K. Co.); and FARQUHAR, GALE B. (Texaco Inc.)		
OFFSHORE PETROLEUM OPERATIONS. Tests show best corrosion inhibitors for high-pressure, temperature pipeline	5-5	96
ABD-EL FATTAH, KHALED A. (Cairo University)		
New gas pseudocritical property equations developed	6-2	144
ABDEL-WALY, A. A. (King Saud University)		
New correlation estimates viscosity of paraffinic stocks	6-16	61
ADAMS, LARRY S. (Chevron USA Production Co.); and OVERSTREET, CHARLES C. (CUDD Pressure Control Inc.)		
Coiled tubing facilitates deep underbalaced workover	3-31	64
ADELMAN, M. A. (Massachusetts Institute of Technology)		
FOCUS: EXPLORATION. What do recent N. Sea unit cost changes mean?	2-3	45
ADELMAN, M. A., and LYNCH, MICHAEL C. (Massachusetts Institute of Technology)		
RESERVES GROWTH: GEOLOGY, TECHNOLOGY, AND ECONOMICS. Fixed view of resource limits creates undue pessimism	4-7	56
AITANI, ABDULLAH M., and HAMID, SYED HALIM (King Fahd University of Petroleum & Minerals)		
DOWNSTREAM IN THE PERSIAN GULF—1: Gulf countries continue to increase refinery capacity, complexity	9-15	36
DOWNSTREAM IN THE PERSIAN GULF—2: The Persian Gulf's petrochemical industry is proliferating	9-22	73
DOWNSTREAM IN THE PERSIAN GULF—Conclusion: To diversify its petrochemicals portfolio, GCC needs liquid feeds	9-29	96
AL-SIYABI, HISHAM, WILLIAMS, EUGENE T., and SLATT, ROGER M. (Colorado School of Mines); STONE, CHARLES G. (Arkansas Geological Commission); WEIMER, PAUL (University of Colorado); DAVIS, ROBERT J. (Schlumberger Wireline & Testing); and JORDAN, DOUGLAS W. (ARCO Venezuela Inc.)		
Arkansas turbidite studies may aid Oklahoma Jackfork exploration	8-18	67
ALEMAN, MIGUEL A., SWINGHOLM, EVAN K., and YUILL, RICHARD M. (Entrix Inc.); and BARKER, GARY, SMITH, GORDON R., and VACAS, FRANCISCO J. (Amoco Inc.)		
SOUTH AMERICA REPORT. Managing nontechnical risks associated with seismic operations in the tropical rain forests of Ecuador	4-21	50
ALEXANDER, FRANK C. JR. (International Legal Consultant)		
CENTRAL ASIAN FSU. Caspian reserves luring operators	7-21	23
ALI, SYED A., SHELBY, DAVID C., and WAGNER, D. C. (Chevron U.S.A. Production Co.); and FOXENBERG, WILLIAM E. (OSCA)		
New test identifies completion fluid compatibility problems	8-25	95
ALI, SYED A. (Chevron U.S.A. Production Co.); HILL, DONALD G., and MCCONNELL, S. BRUCE (Schlumberger Dowell); and JOHNSON, MICHAEL R. (Gulf States Environmental Solutions Inc.)		
Process, optimized acidizing reduce production facility upsets	2-10	44
ALI, SYED A. (Chevron U.S.A. Production Co.); and NGUYEN, PHILIP D., and WEAVER, JIMMIE D. (Halliburton Energy Services)		
Polymer particulates control fluid loss during well completions	5-12	65
ALLEN, GEORGE, STEARNS, MICHAEL, MONTELEONE, PATRIC, and UPHOFF, THOMAS (Mohave Oil and Gas Corp.)		
Exploratory well to start in Lusitanian basin, Portugal	12-8	67
ALTHER, GEORGE (Biomin Inc.)		
Organoclay cost effectively removes oil from produced water	4-14	54
ALTUNBAY, MEHMET, TANG, XIAOMING, GEORGI, DAN, and KASAP, EKREM (Western Atlas Logging Services)		
PRODUCTION REPORT. Permeability profiles provide new reservoir management tools	9-29	74
ALVEAL, ENRIQUE DÁVILA (Petrox SA Refinería de Petróleo); and KARPENSKI, MARTIN J. (Foster Wheeler Power Systems Inc.)		
HOW ARE STRATEGIC ALLIANCES WORKING? Partners assume risks, lower finance costs of delayed coker-cogeneration project in Chile	3-31	55
ANDERSON, G. C., GILSDORF, N. L., and KON, M. Y. (UOP); BAARS, F. J. (UOP Ltd.); and SHUVEROV, VLADIMIR M., and KRYLOV, VALERY A. (Lukoil-Permnefteorgsintez)		
Catalyst improves octane at Perm refinery	11-24	49
ANDERSON, MICHAEL (Brimstone Engineering Services Inc.)		
New equations calculate Claus unit sulfur-recovery efficiency	11-17	73
ANDERSON, MICHAEL E., and SIEGELL, JEFFREY H. (Exxon Research & Engineering Co.)		
New calculation method alters tank emission reports	11-17	77

	Date	Page
ATTANASI, EMIL D., and SCHMOKER, JAMES W. (U.S. Geological Survey)		
Reserve growth important to U.S. gas supply	1-27	95
AVIDAN, AMOS (Mobil LNG Inc.)		
WORLDWIDE GAS PROCESSING. LNG report	6-2	49
AVIDAN, AMOS, GARDNER, ROBERT E., NELSON, DANIEL, and BORRELLI, EUGENE N. (Mobil LNG Inc.); and RETHORE, TARA J. (Arthur D. Little Inc.)		
WORLDWIDE GAS PROCESSING. LNG links remote supplies and markets	6-2	54
AYALA, JOHN S., and CANNEY, WILLIAM M. (Aspen Technology Inc.);and VERMEER, PETER J., and PEDERSEN, CLIFFORD C. (Sunoco Inc.)		
Blend-control system all but eliminates reblends for Canada refiner	7-28	74
AYNBINDER, ALEXANDER (Fluor Daniel Inc.)		
PIPELINE REPORT. New method determines effect of concrete coating on pipe-collapse pressure	10-27	57
B		
BAARS. F. J. (UOP Ltd.); SHUVEROV, VLADIMIR M., and KRYLOV, VALERY A. (Lukoil-Permnefteorgsintez); and ANDERSON, G. C., GILSDORF, N. L., and KON, M. Y. (UOP)		
Catalyst improves octane at Perm refinery	11-24	49
BAGIROV, ELCHIN (Azerbaijan Academy of Sciences); and LERCHE, IAN (University of South Carolina)		
Hydrates represent gas source, drilling hazard	12-1	99
BAHOUMINA, and TISON, MARC (Elf Congo); and TAYLOR, WILLIAM M. (Cameron)		
OFFSHORE PETROLEUM OPERATIONS. Cold-forged connector ties back well risers in Congo field	5-5	90
BAKER, GEORGE (Baker & Associates)		
COMMENT: Mixed signals in Mexican gas markets: Long-term competition benefits delayed	12-8	28
BARBOZA, GUILLERMO, BARRIENTOS, JAIME, BOTTAZZI, GIOVANNI, and FERNÁNDEZ, ALBERTO (Hydrocarbons Directorate, Ministry of Environment and Energy)		
Costa Rican data synthesis indicates oil, gas potential	5-12	76
BARKER, GARY, SMITH, GORDON R., and VACAS, FRANCISCO J. (Amoco Corp.); and SWINGHOLM, EVAN K., YUILL, RICHARD M., and ALEMAN, MIGUEL A. (Entrix Inc.)		
SOUTH AMERICA REPORT. Managing nontechnical risks associated with seismic operations in the tropical rain forests of Ecuador	4-21	50
BARON, JOHN J., and LAWRENCE, J. E. (Shell Canada Ltd.); and KING, GRAEME G. (Greenpipe Industries Ltd.)		
World's longest sulfur pipeline operating smoothly after 3 years	1-20	59
BARON, JOHN J. (Shell Canada Ltd.); and WOLFE, DONALD H. (ProFlex Pipe Corp.)		
Flexible pipe combats corrosion threat at sour brine injection site	6-9	48
BARUSCO F., PEDRO J., JUINITI, RICARDO, and MORAIS, MARCOS G. G. (Petrobras E&P)		
PRODUCTION REPORT. Water depth production record set off Brazil	9-29	59
BARRETT, JUSTINE (Control Risks Group Ltd.)		
ENERGY COMPANY SECURITY. Managing energy company security risks in Latin America	6-9	44
BARRIENTOS, JAIME, BOTTAZZI, GIOVANNI, FERNÁNDEZ ALBERTO, and BARBOZA, GUILLERMO (Hydrocarbons Directorate, Ministry of Environment and Energy)		
Costa Rican data synthesis indicates oil, gas potential	5-12	76
BAYOUMI, HESHAM, ROBSON, DAVID, and MORSI, KAMAL (Abu Dhabi National Oil Co.)		
Pipeline rehab vs. replacement depends on condition, service	9-22	68
BEAN, CLARKE (Chevron USA Production); PLUMB, RICHARD (Schlumberger Cambridge Research); HSU, KAI, and MINERBO, GERALD N. (Schlumberger Anadrill); and HASHEM, MOHAMED (Shell Offshore)		
Sonic-while-drilling tool detects overpressured formations	8-4	59
BECK, ROBERT J. (Journal Staff)		
FORECAST AND REVIEW. U.S. oil, natural gas demand still climbing	1-27	45
FORECAST AND REVIEW. Non-OPEC oil supply to outpace demand gains in 1997	1-27	62
A new boom?	2-17	17
CAPITAL SPENDING OUTLOOK. U.S. companiesv capital outlays to hit highest level since 1991	2-17	34
Seeing the entire global environment	6-23	13
MIDYEAR FORECAST. Non-OPEC Supply to test OPEC's quota resolve in second half	7-28	45
The OGJ numbers team	7-28	21
IPAA: U.S. oil, gas outlook positive in 1998	11-24	38
Mother Nature's gift to forecasters	12-29	15
BECK, ROBERT J., and BELL, LAURA (Journal Staff)		
High prices boosted 9-month profits in 1996	1-27	40
Higher prices spark 1996 profits rise	4-14	34
Higher prices boost revenues, net income	6-23	30
OGJ200. OGJ200 scores solid financial, operating gains	9-8	43
Price/demand strength buoys 1st half profits	9-29	52
BECK, ROBERT J., and PETZET, G. ALAN (Journal Staff)		
FORECAST AND REVIEW: Revenue surge to sustain drilling in U.S. and Canada	1-27	66
MIDYEAR FORECAST. U.S. drilling may soften; Canada, world levels strong	7-28	64
BECK, ROBERT J., and RADLER, MARILYN (Journal Staff)		
OGJ200. State-owned companies of OGJ100 control big share of world's oil	9-8	62
BECKER, ALAN B. (Modern Energy Concepts); GODEC, MICHAEL L., and CRAWFORD, PETER G. (ICF Resources Inc.); and BRASHEAR, JERRY PAUL (The Brashear Group LLC)		
U.S. RESERVES REPLACEMENT—1: Why arenvt more U.S. companies replacing oil and gas reserves?	3-3	85
U.S. RESERVES REPLACEMENT—2: How to overcome difficulties with reserves replacement	3-10	75
U.S. RESERVES REPLACEMENT—3 (Conclusion): Here are analytical approaches for reserves replacement planning	3-17	106
BECKER, JOHN S. (Ultramar Diamond Shamrock Corp.); LACOUR, MARK J. (Citgo Petroleum Corp.); and DAVEY, STEVEN W., and HALEY, JOHN T. (Grace Davison)		
SOx control additive reduces emissions, saving capital investments	12-29	76
BELL, C. JAMES (Poco Petroleums Ltd.); and MEHRA, YUV R. (Advanced Extraction Technologies Inc.)		
Canadian plant ups C3 recovery without more dehydration	9-29	86
BELL, LAURA (Journal Staff)		
In our own backyard	4-7	21
BELL, LAURA, and BECK, ROBERT J. (Journal Staff)		
High prices boosted 9-month profits in 1996	1-27	40
Higher prices spark 1996 profits rise	4-14	34
Higher prices boost revenues, net income	6-23	30
OGJ200. OGJ200 scores solid financial, operating gains	9-8	43
Price/demand strength buoys 1st half profits	9-29	52
BELLOW, EDWARD J. JR., GHAZAL, FOUAD P., and SILVERMAN, ALAN J. (Mobil Technology Co.); and MYERS, STEPHEN D. (Mobil Oil Corp.)		
WORLDWIDE GAS PROCESSING. Technology advances keeping LNG cost-competitive	6-2	74
BENSON, RONALD H., ENGLAND, KEVIN W., HOLT, RON, and PISKURICH, NICHOLAS C. (Schlumberger Cos.); WOODROOF, ROBERT A. JR. (ProTechnics International); and KRUS, HOLLY G., HALEY, KEN, and BRITT, LARRY (Amoco Exploration & Production Co.)		
HOW ARE STRATEGIC ALLIANCES WORKING? Strategic alliance, multidisciplinary teamwork enhanced field development in Cotton Valley trend	3-31	43

	Date	Page
BERNAT, BUCK, and BERNAT, HENRY (Vibration Technology LLC)		
Mechanical oscillator frees stuck pipe strings using resonance technology	11-3	68
BERNAT, HENRY, and BERNAT, BUCK (Vibration Technology LLC)		
Mechanical oscillator frees stuck pipe strings using resonance technology	11-3	68
BERTEUSSEN, KARL A., and BROWN, R. JAMES (PGS Reservoir)		
APPLIED GEOPHYSICS REPORT. Marine four-component acquisition boosts role of shear-wave data in seismic work	11-3	61
BERTO, FRANK J. (Consultant)		
TANK GAUGING—1: Review of tank measurement errors reveals techniques for greater accuracy	3-3	68
TANK GAUGING—Conclusion: Automatic gauging technologies have advanced, but better accuracy is needed	3-10	63
BEYCHOK, MILTON R. (Consultant)		
Instantaneous flow rates overstate gas release determination	7-28	80
BICKHAM, KENNETH L., NGUYEN, H. T., and PENBERTHY, W. L. JR. (Baker Oil Tools)		
HORIZONTAL COMPLETIONS—CONCLUSION: Gravel packing prevents productivity decline	9-1	56
BIESEMAN, TACO (Shell Research & Technical Services); MAGLIONE, ROBERTO (Agip S.p.A.); LAGE, ANTONIO, and NAKAGAWA, EDSON (Petrobras); and WANG, ZHIHUA, VEFRING, ERLEND, and ROMMETVEIT, ROLV (RF-Rogaland Research)		
UNDERBALANCED DRILLING—Conclusion: Underbalanced drilling model simulates dynamic well bore conditions	7-7	62
BIJLEVELD, AARNOUD (Shell Research & Technical Services); MAGLIONE, ROBERTO (Agip S. p. A.); GAZANIOL, DIDIER (Elf Aquitaine S.A.); and WANG, ZHIHUA, and ROMMETVEIT, ROLV (RF-Rogaland Research)		
UNDERBALANCED DRILLING—1: Underbalanced drilling requires downhole pressure management	6-16	54
BILODEAU, DENIS, and MASTROGIACOMO, MICHAEL (Petro-Canada Products); and TREIBER, STEVEN, and WALKER, JOHN (Treiber Controls Inc.)		
FOCUS: REFINING. Advanced control of hydrogen network reduces energy consumption	9-1	72
BODENHAMER, KEVIN C. (Mid-America Pipeline Co.)		
U.S. LPG pipeline begins deliveries to Pemex terminal	8-11	55
BORRELLI, EUGENE N., AVIDAN, AMOS A., GARDNER, ROBERT E., and NELSON, DANIEL (Mobil LNG Inc.); and RETHORE, TARA J. (Arthur D. Little Inc.)		
WORLDWIDE GAS PROCESSING. LNG links remote supplies and markets	6-2	54
BOTTAZZI, GIOVANNI, FERNÁNDEZ, ALBERTO, BARBOZA, GUILLERMO, and BARRIENTOS, JAIME (Hydrocarbons Directorate, Ministry of Environment and Energy)		
Costa Rican data synthesis indicates oil, gas potential	5-12	76
BOURGEOIS, REED, HARDER, BRIAN J., JOHN, CHACKO J., and JONES, BOBBY L. (Louisiana State University); and MONCRIEF, JAMES E. (Consulting Geologist)		
Tuscaloosa marine shale may be untouched Gulf Coast oil play	12-29	91
BRACHO, JOS/ LUIS, and RIVAS M., MARGIORI (Lagoven S.A.); and MURRAY, JAMES E. (Consultant)		
NGL recovery being hiked by natural-gasoline recirculation	7-7	67
BRASHEAR, JERRY PAUL (The Brasher Group LLC); BECKER, ALAN B. (Modern Energy Concepts); and GODEC, MICHAEL L., and CRAWFORD, PETER M. (ICF Resources Inc.)		
U.S. RESERVES REPLACEMENT—1: Why arenvt more U.S. companies replacing oil and gas reserves?	3-3	85
U.S. RESERVES REPLACEMENT—2: How to overcome difficulties with reserves replacement	3-10	75
U.S. RESERVES REPLACEMENT—3 (Conclusion): Here are analytical approaches for reserves replacement planning	3-17	106
BRAY, R. P. (Amoco Production Co.); and WESTERMARK, R. V. (OGCI Management)		
Amoco opens drilling test facility to industry	4-7	66
BRITT, LARRY, KRUS, HOLLY G., and HALEY, KEN (Amoco Exploration & Production Co.); BENSON, RONALD H., ENGLAND, KEVIN W., HOLT, RON, and PISKURICH, NICHOLAS C. (Schlumberger Cos.); and WOODROOF, ROBERT A. JR. (ProTechnics International)		
HOW ARE STRATEGIC ALLIANCES WORKING? Strategic alliance, multidisciplinary teamwork enhanced field development in Cotton Valley trend	3-31	43
BROWN, L. A. (HARVEY) JR. (Hughes Christensen Co.); STOLTZ, D. S. (ARCO Alaska Inc.); and NIMS, D. G. (BP Exploration Alaska)		
Drill bit benchmarking improves drilling performance	6-2	139
BROWN, R. JAMES, and BERTEUSSEN, KARL A. (PGS Reservoir)		
APPLIED GEOPHYSICS REPORT. Marine four-component acquisition boosts role of shear-wave data in seismic work	11-3	61
BROWN, ROBERT L. (Mobil Oil Corp.); and CLARY, ROXANNA (Mobil Technology Co.)		
WORLDWIDE GAS PROCESSING. World economic growth pushing LNG use	6-2	60
BROWNE, JOHN (British Petroleum Co. plc)		
COMMENT: Positive action by industry needed on global climate change, BP says	6-9	14
BURCHETT, RAYMOND R. (Nebraska Geological Survey)		
Oil production dominates in Nebraska's Dundy County	10-20	86
BURDEN, PAUL L. A., and DAVIES, CHRISTOPHER P. N. (Soekor E&P (Pty.) Ltd.)		
SOUTH AFRICA OFFSHORE E&P—1: Exploration to first production on Block 9 off South Africa	9-8	92
SOUTH AFRICA OFFSHORE E&P—2: Oribi field is South Africa's first offshore crude oil production	9-15	63
C		
CAMPBELL, C. J. (Petroleum Consultant)		
RESERVES GROWTH: GEOLOGY, TECHNOLOGY, AND ECONOMICS. Better understanding urged for rapidly depleting reserves	4-7	51
WORLDWIDE PRODUCTION. Depletion patterns show change due for production of conventional oil	12-29	33
CANDIDO, SAMUEL S., and CRISOSTOMO, ELINO V. (Petron Corp.)		
Philippine refiner completes low-sulfur diesel upgrade	1-27	74
CANNEY, WILLIAM M., and AYALA, JOHN S. (Aspen Technology Inc.); and VERMEER, PETER J., and PEDERSEN, CLIFFORD C. (Sunoco Inc.)		
Blend-control system all but eliminates reblends for Canada refiner	7-28	74
CARPENTER, DANIEL G. (Mobil New Business Development, Americas), CONRAD, KEITH T. (Mobil Exploration Norway); and PETERS, KEN E., and WAGNER, JOHN B. (Mobil Technology Co.)		
BOLIVIA EXPLORATION—1: World class Devonian potential seen in eastern Madre de Dios basin	2-17	61
BOLIVIA EXPLORATION—2: Eastern Madre de Dios Devonian generated large volumes of oil	2-24	61
CARRANZA, DANIEL, and KERNAN, KEVIN (Transportadora de Gas del Sur S.A.)		
Argentine gas plant expansion makes most of existing infrastructure	5-26	64
CARRE C., LEANDRO J. (Corpoven SA); PORTILLO, RICARDO, and LEAL, MARCOS (Hugh Christensen Co.);and ROTHE, JORGE, RODRIQUEZ (Lagoven SA)		
FOCUS: DRILLING. Ream-while-drilling tool cuts costs of three Venezuelan wells	1-13	33

	Date	Page
CARROLL, JOHN J. (Gas Liquids Engineering); and LUI, DAVID W. (Lui Petroleum Management Inc.)		
Density, phase behavior keys to acid gas injection	6-23	63
CARSON, MARGARET M. (Enron Corp.)		
THE CHANGING ENERGY MIX. Natural gas central to world's future energy mix	8-11	37
CASH, ELAINE L., and VAN SICKLE, KIRK H. (Mobil Producing Nigeria); and HUGENTOBLER, MIKE (Landmark Graphics Corp.)		
Teamwork, technology boost reserves, output off Nigeria	7-14	69
CASTRO, RICARDO, MURPHY, DAVID, and FRIEDEMANN, CHRIS (McKinsey & Co. Inc.)		
MANAGEMENT PERSPECTIVE: Can the E&P industry avoid future shock?	9-8	23
CAVOULACOS, PANOS, and DEFFARGES, ETIENNE (Booz•Allen & Hamilton)		
FOCUS: EXPLORATION. Achieving profitable growth in E&P: New strategies, business model	5-26	42
CHADBOURNE, DAYLE (Amoco Canada Petroleum Co.); PICARD, DAVID (Clearstone Engineering Ltd.); and WRUBLESKI, ROBERT, FERG, GORDON, and PERRIN, DARYL (Shell Canada Ltd.)		
PIPELINE REPORT. Canadian crude terminal resolves tank-odor problems	10-27	50
CHAMPLIN, STEPHEN D. (Mississippi Office of Geology)		
Interest grows in Mississippi's Upper Jurassic Cotton Valley trend	6-23	75
CHANG, THI (Journal Staff)		
Refiners and GTL hype	12-22	13
WORLDWIDE REFINING. Good capacity gains and restructuring highlight worldwide refining	12-22	33
CHEN, REUVEN (Tel Aviv University); VAZ, J. EDUARDO (Venezuelan Institute of Scientific Research); MATHUR, V. K. (U.S. Naval Surface Warfare Center); and SIEGEL, FREDERIC R. (George Washington University)		
The integrated radiation environment at well sites an adjunct to petroleum exploration	10-6	91
CHESNOY, ANDRE-BERNARD (Hydrocarbons Production Consultant); and PACK, DAVID J. (Gas Measurement Consultant)		
S_8 threatens natural gas operations, environment	4-28	74
CHISHOLM, PHILLIP R. (Petroleum Marketers Association of America)		
PETROLEUM PRODUCTS MARKETING. PMAA: U.S. petroleum marketers facing dramatic change	6-23	40
CHIU, CHEN-HWA (Bechtel Corp.)		
LPG-recovery processes for baseload LNG plants examined	11-24	59
CHOI, JAE-YONG (University College); and PAIK, KEUN-WOOK (Royal Institute of International Affairs)		
RUSSIA REPORT. Pipeline gas trade between Asian Russia, Northeast Asia gets fresh look	8-18	41
CHUNG, KENG H. (Syncrude Canada Ltd.); and XU, CHUNMING, HU, YUNXIANG, and WANG, RENAN (Petroleum University)		
Supercritical fluid extraction reveals resid properties	1-20	66
CIBULKA, MIROSLAV, and KARASEK, BRETISLAV (MERO CR, A.S.)		
Czech crude-oil terminal is in operation	2-3	54
Czech crude-oil supplies diversified by new pipeline	8-25	84
CLARY, ROXANA (Mobil Technology Co.); and BROWN, ROBERT L. (Mobil Oil Corp.)		
WORLDWIDE GAS PROCESSING. World economic growth pushing LNG use	6-2	60
CLEMENT, JOHN P. III (Exxon Co. International)		
Effective collaboration is the key to a successful operator/ supplier relationship	10-13	47
COLE, JON C., HERRMANN, ROBERT P., and SCOTT, ROBERT J. (Transocean Offshore Inc.); and SHAUGHNESSY, JOHN M. (Amoco Corp.)		
New ultra-deepwater rig with dual rotaries will reduce costs	5-26	69
COLLINS, KEVIN (Mobil Oil Canada); and TREIBER, STEVEN, and WALKER, JOHN (Treiber Controls Inc.)		
Multivariable control benefits Alberta plant	5-5	118
COMEAU, LARRY (Sperry-Sun Drilling Services)		
PRACTICAL DRILLING TECHNOLOGY. Integrating surface systems with downhole data improves underbalanced drilling	3-3	56
CONRAD, KEITH T. (Mobil Exploration Norway); PETERS, KEN E., and WAGNER, JOHN B. (Mobil Technology Co.); and CARPENTER, DANIEL G. (Mobil New Business Development, Americas)		
BOLIVIA EXPLORATION—1: World class Devonian potential seen in eastern Madre de Dios basin	2-17	61
BOLIVIA EXPLORATION—2: Eastern Madre de Dios Devonian generated large volumes of oil	2-24	61
COOK, RICHARD (Institute of Geological & Nuclear ciences); and GREGG, ROGER (New Zealand Crown Minerals)		
NEW ZEALAND BASINS—1: Overview of New Zealand's petroleum systems, potential	1-6	55
NEW ZEALAND BASINS—2: Southern, eastern New Zealand petroleum systems examined	1-13	62
COWGILL, R. MICHAEL, and SHIRES, THERESA M. (Radian International LLC); SELIG, BERND J. (Hartford Steam Boiler Inspection & Insurance Co.); and WILLKE, THEODORE L. (Gas Research Institute)		
FOCUS: PIPELINES. U.S. risk management can reduce regulation, enhance safety	6-16	37
COX, MICHAEL L., and JOHNSON, ELDEN R. (Alyeska Pipeline Service Co.); VIETH, PATRICK H. (Kiefner & Associates Inc.); and RUST, STEVEN W. (Battelle)		
Alyeska program allows pig performance comparison	2-10	52
CRAIG, MICHAEL J. K., and HYDE, STEVEN T. (Spirit Energy 76)		
FOCUS: PRODUCTION. Deepwater Gulf of Mexico more profitable than previously thought	3-10	41
CRAMER, RON (Shell Services Co.); DUNHAM, CLEON (Shell International Exploration & Production B.V.); and HINAI, ALLEY AL (Petroleum Development Oman)		
FOCUS: PRODUCTION. Real-time automation optimizes production economics in Oman	11-24	65
CRAWFORD, PETER M., and GODEC, MICHAEL L. (ICF Resources Inc.); BRASHEAR, JERRY PAUL (The Brashear Group LLC); and BECKER, ALAN B. (Modern Energy Concepts)		
U.S. RESERVES REPLACEMENT—1: Why arenvt more U.S. companies replacing oil and gas reserves?	3-3	85
U.S. RESERVES REPLACEMENT—2: How to overcome difficulties with reserves replacement	3-10	75
U.S. RESERVES REPLACEMENT—3 (Conclusion): Here are analytical approaches for reserves replacement planning	3-17	106
CREEL, PRENTICE, and CROOK, RON (Halliburton Energy Services Inc.)		
Gels, monomer solutions fix pinhole casing leaks	10-13	44
CRISOSTOMO, ELINO V., and CANDIDO, SAMUEL S. (Petron Corp.)		
Philippine refiner completes low-sulfur diesel upgrade	1-27	74
CROOK, RON, and CREEL, PRENTICE (Halliburton Energy Services Inc.)		
Gels, monomer solutions fix pinhole casing leaks	10-13	44
CROSSLEY, N. GRAEME (TransGas Ltd.)		
CAVERN GAS STORAGE—1: Downhole probes evaluate cavern integrity	3-3	74
CAVERN GAS STORAGE—Conclusion: Site tests validate benefits of cavern probes	3-10	69
CROW, PATRICK (Journal Staff)		
U.S. import strategy	1-6	24

	Date	Page
SPR raids signaling demise of U.S. emergency oil stockpile?	1-13	20
Oil: Russian energy's weaker sister?	1-13	32
Alaskan opportunity	1-20	33
Back to Nigeria	1-27	21
Global warming plan	1-27	36
Royalty debate heats	2-3	29
FOCUS: EXPLORATION. Rocky Mountain federal lands pose widespread access issues	2-3	42
Peña's promises	2-10	28
Budget breakout	2-17	28
A shift in Ecuador	2-24	41
Asian ascent	3-3	32
Politics and barbecues	3-10	30
Electric restructuring	3-17	32
Independents set the bidding pace during Gulf of Mexico lease Sale 166	3-17	34
U.S. electricity decontrol tops energy agenda for 105th Congress	3-24	19
NOIA's chief worry today not political	3-24	23
Defending R&D	3-31	40
Signals on Sudan	4-7	31
PR program falters	4-14	38
Gazprom resurgent	4-21	32
Myanmar sanctions	4-28	37
U.S. petroleum firms hit hard by Washington's unilateral sanctions	5-5	37
A monumental controversy	5-5	62
Outlook for Yukos	5-12	36
AFRICA REPORT. Key decisions near for Chad pipeline proposal	5-12	54
Star witnesses	5-19	21
Peña's national energy strategy	5-19	40
EPA forges ahead	5-26	25
A grand day	6-2	33
Royalty ruckus	6-9	23
FOCUS: PIPELINES. National pipeline map for U.S. being developed	6-16	51
Change in Iran	6-16	33
Deleting an additive	6-23	32
Royalty valuation rule changes loom	6-30	25
Browner wins big	6-30	36
Global warming impasse	7-7	31
Grand slam on the slope	7-14	15
Energy czar	7-14	28
Eco-credits	7-21	35
Greenhouse price tag	7-28	36
GTL research	8-4	33
Sanctions update	8-11	26
Indian politics	8-18	21
Safety in China	8-25	42
MMS issues	9-1	36
Caspian dispute	9-8	33
Well frac regs loom	9-15	25
DiBona to retire	9-22	34
Campbell wells	9-29	46
Gore becomes pro-oil	10-6	37
Sanctions showdown	10-13	34
Alyeska at the Smithsonia	10-20	42
Filipino fuels fuss	10-27	35
Groups skewer Clinton's global warming plan	10-27	36
Caspian questions	11-3	33
Gazprom and Iran	11-10	42
Philippines crisis	11-17	44
Decontrol in India	11-24	45
Industrialized, developing nations clash at Kyoto climate change talks	12-1	29
Washington briefs	12-1	32
Another energy czar	12-8	24
The wisdom of spell checker	12-15	13
Red's straw poll	12-15	29
Colombia's prospects	12-22	26
Interior's 32¢ appeals	12-29	25
CRUMP, JAMES G. (World Energy Group)		
HOW ARE STRATEGIC ALLIANCES WORKING? Strategic alliances fit pattern of industry innovation	3-31	59
D		
DAVENPORT, H. A., WILHELM, R., and GUZMAN, C. E. (Shell Offshore Inc.)		
APPLIED GEOPHYSICS REPORT. Calibration method helps in seismic velocity interpretation	11-3	44
DAVEY, STEVEN W., and HALEY, JOHN T. (Grace Davison); BECKER, JOHN S. (Ultramar Diamond Shamrock Corp.); and LACOUR, MARK J. (Citgo Petroleum Corp.)		
SOx control additive reduces emissions, saving capital investments	12-29	76
DAVIES, CHRISTOPHER P. N., and BURDEN, PAUL L. A. (Soekor E&P (Pty.) Ltd.)		
SOUTH AFRICA OFFSHORE E&P—1: Exploration to first production on Block 9 off South Africa	9-8	92
SOUTH AFRICA OFFSHORE E&P—2: Oribi field is South Africa's first offshore crude oil production	9-15	63
DAVIS, ROBERT J. (Schlumberger Wireline & Testing); JORDAN, DOUGLAS J. (ARCO Venezuela Inc.); SLATT, ROGER M., AL-SIYABI, HISHAM, and WILLIAMS, EUGENE T. (Colorado School of Mines); STONE, CHARLES G. (Arkansas Geological Commission); and WEIMER, PAUL (University of Colorado)		
Arkansas turbidite studies may aid Oklahoma Jackfork exploration	8-18	67
DEFFARGES, ETIENNE, and CAVOULACOS, PANOS (Booz•Allen & Hamilton)		
FOCUS: EXPLORATION. Achieving profitable growth in E&P: New strategies, business model	5-26	42
DERCZ, ANDREAS, MÜLLER, FRANK-ULRICH, and ZEPPENFELD, ROLF (ILF Consulting Engineers); and RAJZINGER, JÁN (Slovensky plynárensky priemysel, s.p.)		
Study identifies upgrade scenarios for Slovak gas system	4-7	71
DIAMOND, STUART (CSC Index)		
MANAGEMENT PERSPECTIVE: Internet's impact on the oil and gas industry: reality vs. hype	4-28	23
MANAGEMENT PERSPECTIVE: How oil firms can control runaway enterprise-wide software systems	11-17	25
DIGGINS, ERIC (Shell UL Exploration & Production)		
Classification provides framework for ranking multilateral complexity and well type	12-29	73
DION, RICHARD R. (Economic Research Center for American-Eurasian Studies and Relations)		
CENTRAL ASIAN FSU. How oil, gas investment prospects compare for Azerbaijan, Kazakhstan	7-28	25
COMMENT: Should Kazakhstan go east?	10-6	24
DOLIVO, ELOI (Petroconsultants SA)		
What's been drilled, found in world's deepwater area	8-25	104
DONOVAN, MICHAEL D. (Scientech-NUS); and WILLIAMS, J. PATRICK (Arinc)		
Reliability-based approach reduces flare design relief load	12-15	47
DOWNEY, ROBERT A. (Energy Ingenuity Co.)		
On-site generated nitrogen cuts cost of underbalanced drilling	2-24	77
DRUDY, MICHAEL J., ENDRIZZI, FRED, URBANELLI, ANTHONY A., and LINSER, HENRY J. JR. (Mobil Shipping & Transportation)		
WORLDWIDE GAS PROCESSING. LNG fleet increases in size and capabilities	6-2	79
DUBROVIN, EVGENY FEDYOROVICH, and SLEDKOV, VLADIMIR VLADIMIROVICH (Lukoil Oil Co.); and SALIKHOV, RAVIL GABDULLINOVICH (JSC Lukoil-Burenie)		
Cluster and dual-lateral drilling technologies optimize Russian well production	11-24	53
DUNHAM, CLEON (Shell International Exploration & Production B.V.); HINAI, ALLEY AL (Petroleum Development Oman); and CRAMER, RON (Shell Services Co.)		
FOCUS: PRODUCTION. Real-time automation optimizes production economics in Oman	11-24	65
DUNNE, CHARLES L., WILKINSON, RICHARD D., and TEGGART, BRIAN G. (British Gas Exploration & Production Ltd.)		
Batch drilling in the North Sea expedites extended-reach drilling	6-9	52
DURAND, ALEJANDRO ANAYA (Institute Mexicano del Petróleo)		
Simple rule can be used to calculate friction loss in piping	5-26	77
DURKEE, ED F. (E. F. Durkee & Associates Inc.)		
FOCUS: EXPLORATION. Myanmar's Indaw/Chindwin area has Tertiary, Cretaceous targets	10-20	76

	Date	Page
DURKEE, ED F. (E. F. DURKEE & Associates Inc.); and GERRARD, M. J. (Consultant)		
FOCUS: EXPLORATION. An integrated oil industry runs in Chindwin basin, Myanmar	10-20	63
E		
ECHTERHOFF, LINDA W., and QUINLAN, MICHAEL P. (M. W. Kellogg Co.); and LEPPIN, DENNIS, and MEYER, HOWARD S. (Gas Research Institute)		
Cost-cutting for offshore sulfur recovery processes studied	7-21	54
EGGETT, ROBERT K. (Price Waterhouse LLP)		
MANAGING INDEPENDENT OIL & GAS COMPANIES. Attention to state, local taxes can save producers money	11-17	68
EL-EMAM (Al-Azhar University); GAD, F. K., and NAFEY, A. SAFWAT (Suez Canal University); and ZOGHAIB, N. (Balayim Petroleum Co.)		
New friction factor derived from study of Egyptian gas-field pipeline	11-10	72
ELAGDEL, E., ELSHAWESH, F., and ELHOUD, A. (Petroleum Research Center)		
Tests pinpoint sucker-rod failures	5-26	59
ELHOUD, A., ELAGDEL, E., and ELSHAWESH, F. (Petroleum Research Center)		
Tests pinpoint sucker-rod failures	5-26	59
ELROD, JEFFREY P. (OXY USA Inc.)		
FOCUS: DRILLING. Horizontal air drilling increases gas recovery in depleted zone	6-30	49
ELSHAWESH, F., ELHOUD, A., and ELAGDEL, E. (Petroleum Research Center)		
Tests pinpoint sucker-rod failures	5-26	59
ENDO, SIGERU, FUJITA, SAKAE, and HIRANO, OSAMU (NKK Corp.); and NAGAE, MORIYASU (NKK America)		
New line pipe resists preferential corrosion at welds	3-17	92
ENDRIZZI, FRED, URBANELLI, ANTHONY A., LINSER, HENRY J. JR., and DRUDY, MICHAEL J. (Mobil Shipping & Transportation)		
WORLDWIDE GAS PROCESSING. LNG fleet increases in size and capabilities	6-2	79
ENGINEER, ROY, and GRILLETTE, GARY (Bechtel Petroleum Operations Inc.)		
Program solves for oil well inflow performance	6-23	60
ENGINEER, ROY (AERA Energy LLC); and GRILLETTE, GARY (Bechtel Petroleum Operations Inc.)		
Program solves for gas well inflow performance	10-20	54
ENGLAND, KEVIN W., HOLT, RON, PISKURICH, NICHOLAS C., and BENSON, RONALD H. (Schlumberger Cos.); WOODROOF, ROBERT A. JR. (ProTechnics International); and KRUS, HOLLY G., HALEY, KEN, and BRITT, LARYY (Amoco Exploration & Production Co.)		
HOW ARE STRATEGIC ALLIANCES WORKING? Strategic alliance, multidisciplinary teamwork enhanced field development in Cotton Valley trend	3-31	43
F		
FAGAN, ALPHONSUS (Newfoundland and Labrador Department of Mines and Energy)		
More operators set sights on western Newfoundland	10-27	78
FARQUHAR, GALE B. (Texaco Inc.); KANE, RICHARD E., and ABAYARATHNA, DHARMA (CLI International Inc.); and SANDERS, DAVID H. (Texaco North Sea U.K. Co.)		
OFFSHORE PETROLEUM OPERATIONS. Tests show best corrosion inhibitors for high pressure, temperature pipeline	5-5	96
FARRAR, GARY (Journal Staff)		
How refinery fuel indexes have varied	1-6	42
Nelson-Farrar cost indexes	1-6	51
Nelson-Farrar cost indexes	2-3	53
Nelson-Farrar cost indexes	3-3	79
Nelson-Farrar cost indexes	4-7	77
Indexes for selected equipment show moderate increase	4-7	78
Nelson-Farrar cost indexes	5-5	112
Nelson-Farrar cost indexes	6-2	143
Nelson-Farrar cost indexes	7-7	71
How Nelson-Farrar indexes of chemical costs have changed	7-7	72
Nelson-Farrar cost indexes	8-4	67
Nelson-Farrar cost indexes	9-1	61
Nelson-Farrar cost indexes	10-6	81
Changes in the indexes for nonmetallic building materials	10-6	86
Nelson-Farrar cost indexes	11-3	81
Nelson-Farrar cost indexes	12-1	60
FAUL, RONNIE, and GRIFFITH, JAMES (Halliburton Energy Services Inc.)		
Mud management, special slurries improve deepwater cementing operations	10-20	49
FENNER, GARY W., and PHILCOX, JACK (Praxair Inc.)		
GAS AND POWER FROM REFINING. A Texas project illustrates the benefits of integrated gasification	7-14	41
FERG, GORDON, PERRIN, DARYL, and WRUBLESKI, ROBERT (Shell Canada Inc.); CHADBOURNE, DAYLE (Amoco Canada Petroleum Co.); and PICARD, DAVID (Clearstone Engineering Ltd.)		
PIPELINE REPORT. Canadian crude terminal resolves tank-odor problems	10-27	50
FERNÁNDEZ, ALBERTO, BARBOZA, GUILLERMO, BARRIENTOS, JAIME, and BOTTAZZI, GIOVANNI (Hydrocarbons Directorate, Ministry of Environment and Energy)		
Costa Rican data synthesis indicates oil, gas potential	5-12	76
FERNÁNDEZ, CÉSAR L. (C&F Engineering S.A.); and LYNCH, JOE T. (Ortloff Engineers Ltd.)		
Argentine plant increases capacity, improves NGL recoveries	10-6	74
FOUGERE, PETE (Transocean Offshore Inc.); and ROCHE, JOSEPH R. (Hydril Co.)		
FOCUS: DRILLING. Multiplex BOP system decreases riser disconnect time	12-1	86
FOXENBERG, WILLIAM E. (OSCA); and ALI, SYED A., SHELBY, DAVID C., and WAGNER, D. C. (Chevron U.S.A. Production Co.)		
New test identifies completion fluid compatibility problems	8-25	95
FRIEDEMANN, CHRIS, CASTRO, RICARDO, and MURPHY, DAVID (McKinsey & Co. Inc.)		
MANAGEMENT PERSPECTIVE: Can the E&P industry avoid future shock?	9-8	23
FUJITA, SAKAE, ENDO, SIGERU, and HIRANO, OSAMU (NKK Corp.); and NAGAE, MORIYASU (NKK America)		
New line pipe resists preferential corrosion at welds	3-17	92
G		
GAD, F. K., and NAFEY, A. SAFWAT (Suez Canal University); ZOGHAIB, N. (Balayim Petroleum Co.); and EL-EMAM, N. (Al-Azhar University)		
New friction factor derived from study of Egyptian gas-field pipeline	11-10	72
GADDY, DEAN E. (Journal Staff)		
Technology needs management	6-30	21
Ultradeep drillship will react to heave with electric-compensating drawworks	7-21	68
Multilateral casing-exit technology eliminates floating rig heave	9-1	47
Counting the rigs	9-22	19
DRILLING REPORT. Rig-activity services use various methods to track drilling activity	9-22	45
Floating dry dock and wheel-on-rail system expedites jack up repairs	9-29	94
Ultrasonic processor reduces drill-cuttings size and eliminates subsea mounds	10-6	80
Reed: U.S. rig fleet indicators on the rise	10-20	36
Remote controlled, hydraulic swing-arm reduces tong handling efforts	12-22	102
GADDY, DEAN, MORITIS, GUNTIS, and TRUE, WARREN R (Journal Staff)		
OTC technical program underscores technological advances offshore	5-19	25

	Date	Page
GALLAHER, DALE M. (Shell Offshore Inc.); and MAHONEY, MICHAEL J. (Alliance Engineering Inc.)		
PIPELINE REPORT. Enchilada platform anchors offshore Louisiana transportation network	10-27	45
GARDNER, ROBERT E., NELSON, DANIEL, BORRELLI, EUGENE N., and AVIDAN, AMOS A. (Mobil LNG Inc.); and RETHORE, TARA J. (Arthur D. Little Inc.)		
WORLDWIDE GAS PROCESSING. LNG links remote supplies and markets	6-2	54
GARRETT. ROBERT L. (Garrett Fluid Technology); STOKES, REBECCA S. (Coastal Superior Solutions Inc.); and MENSA-WILMOT, GRAHAM (GeoDiamond)		
PAO lubricant inhibits bit balling, speeds drilling	4-21	68
GAZANIOL, DIDIER (Elf Aquitaine S.A.); WANG, ZHIHUA, and ROMMETVEIT, ROLV (RF-Rogaland Research); BIJLEVELD, AARNOUD (Shell Research & Technical Services); and MAGLIONE, ROBERTO (Agip S.p.A.)		
UNDERBALANCED DRILLING—1: Underbalanced drilling requires downhole pressure management	6-16	54
GEORGI, DAN, KASAP, EKREM, ALTUNBAY, MEHMET, and TANG, XIAOMING (Western Atlas Logging Services)		
PRODUCTION REPORT. Permeability profiles provide new reservoir management tools	9-29	74
GERRARD, M. J. (Consultant); and DURKEE, ED F. (E. F. Durkee & Associates Inc.)		
FOCUS: EXPLORATION. An integrated oil industry runs in Chindwin basin, Myanmar	10-20	63
GHAZAL, FOUAD P., SILVERMAN, ALAN J., and BELLOW, EDWARD J. JR. (Mobil Technology Co.); and MYERS, STEPHEN D. (Mobil Oil Corp.)		
WORLDWIDE GAS PROCESSING. Technology advances keeping LNG cost-competitive	6-2	74
GILSDORF, N. L., KON, M. Y., and ANDERSON, G. C. (UOP); BAARS, F. J. (UOP Ltd.); and SHUVEROV, VLADIMIR M., and KRYLOV, VALERY A. (Lukoil-Permnefteorgsintez)		
Catalyst improves octane at Perm refinery	11-24	49
GLAUTHIER, TAD, KALKSTEIN, HAROLD, and WILLIAMSON, ROBERT (Boston Consulting Group)		
PETROCHEMICAL REPORT. Petrochemical producers gain advantage with novel business strategies	5-19	54
GODEC, MICHAEL L., and CRAWFORD, PETER M. (ICF Resources Inc.); BRASHEAR, JERRY PAUL (The Brashear Group LLC); and BECKER, ALAN B. (Modern Energy Concepts)		
U.S. RESERVES REPLACEMENT—1: Why aren't more U.S. companies replacing oil and gas reserves?	3-3	85
U.S. RESERVES REPLACEMENT—2: How to overcome difficulties with reserves replacement	3-10	75
U.S. RESERVES REPLACEMENT—3 (Conclusion): Here are analytical approaches for reserves replacement planning	3-17	106
GOLDEN, SCOTT W. (Process Consulting Services Inc.)		
FCC REVAMP—1: Case studies reveal common design, equipment errors in revamps	4-7	62
FCC REVAMP—CONCLUSION: Simple engineering changes fix product recovery problems	4-14	47
GOLDSTEIN, LAWRENCE J. (Petroleum Industry Research Foundation Inc.)		
COMMENT: Risks to global crude oil flow sustain need for strategic reserve	9-15	20
GRACE, JOHN D. (Earth Science Associates)		
U.S. CONVENTIONAL RESOURCES—1: U.S. resource estimates give insights to key oil, gas plays	3-31	80
U.S. CONVENTIONAL RESOURCES—2: Resource assessment analysis identifies 21st century plays	4-14	97
U.S. CONVENTIONAL RESOURCES—3: Resource data provide insights into U.S. exploration risk	4-28	84
GREBER, EMIL, SCHEGG, ROLAND, and LEU, WERNER (Geoform Ltd.)		
New exploration concepts spark Swiss gas, oil prospects	9-29	102
GREGG, ROGER (New Zealand Crown Minerals); and COOK, RICHARD (Institute of Geological & Nuclear Sciences)		
NEW ZEALAND BASINS—1: Overview of New Zealand's petroleum systems, potential	1-6	55
NEW ZEALAND BASINS—2: Southern, eastern New Zealand petroleum systems examined	1-13	62
GRIFFIN, JOHN A. (Heidrick & Struggles)		
MANAGING INTEGRATED OIL & GAS COMPANIES. Strategic approach needed for oil company recruitment	11-10	64
GRIFFITH, JAMES, and FAUL, RONNIE (Halliburton Energy Services Inc.)		
Mud management, special slurries improve deepwater cementing operations	10-20	49
GRILLETTE, GARY, and ENGINEER, ROY (Bechtel Petroleum Operations Inc.)		
Program solves for oil well inflow performance	6-23	60
GRILLETTE, GARY (Bechtel Petroleum Operations Inc.); and ENGINEER, ROY (AERA Energy LLC)		
Program solves for gas well inflow performance	10-20	54
GUZMAN, C. E., DAVENPORT, H. A., and WILHELM, R. (Shell Offshore Inc.)		
APPLIED GEOPHYSICS REPORT. Calibration method helps in seismic velocity interpretation	11-3	44
H		
HAJDIK, BROCK (CBS Engineering Inc.); LOREY, MANFRED (Filtan Anglagenbau GmbH); STEINLE, JÜRGEN (BEB Erdöl & Erdgas GmbH); and THOMAS, KEITH (Falk & Thomas Engineering GmbH)		
Vortex tube can increase liquid hydrocarbon recovery at plant inlet	9-8	76
HALEY, JOHN T., and DAVEY, STEVEN W. (Grace Davison); BECKER, JOHN S. (Ultramar Diamond Shamrock Corp.); and LACOUR, MARK J. (Citgo Petroleum Corp.)		
SOx control additive reduces emissions, saving capital investments	12-29	76
HALEY, KEN, BRITT, LARRY, and KRUS, HOLLY G. (Amoco Exploration & Production Co.); BENSON, RONALD H., ENGLAND, KEVIN W., HOLT, RON, and PISKURICH, NICHOLAS C. (Schlumberger Cos.); and WOODROOF, ROBERT A. JR. (Pro Technics International)		
HOW ARE STRATEGIC ALLIANCES WORKING? Strategic alliance, multidisciplinary teamwork enhanced field development in Cotton Valley trend	3-31	43
HAMID, SYED HALIM, and AITANI, ABDULLAH M. (King Fahd University of Petroleum & Minerals)		
DOWNSTREAM IN THE PERSIAN GULF—1: Gulf countries continue to increase refinery capacity, complexity	9-15	36
DOWNSTREAM IN THE PERSIAN GULF—2: The Persian Gulf's petrochemical industry is proliferating	9-22	73
DOWNSTREAM IN THE PERSIAN GULF—Conclusion: To diversify its petrochemicals portfolio, GCC needs liquid feeds	9-29	96
HARDER, BRIAN J., JOHN, CHACKO J., JONES, BOBBY L., and BOURGEOIS, REED (Louisiana State University); and MONCRIEF, JAMES E. (Consulting Geologist)		
Tuscaloosa marine shale may be untouched Gulf Coast oil play	12-29	91
HARRIS, RICHARD A. (ABB Randall); and MILIOS, PAUL B. (El Paso Field Services)		
Large U.S. liquids plant starts up	5-12	60
HART, BRUCE S. (New Mexico Bureau of Mines and Mineral Resources)		
New targets in the Bone Spring formation, Permian Basin	7-28	85
HASHEM, MOHAMED (Shell Offshore); BEAN, CLARKE L. (Chevron USA Production); PLUMB, RICHARD (Schlumberger Cambridge Research); and HSU, KAI, and MINERBO, GERALD N. (Schlumberger Anadrill)		
Sonic-while-drilling tool detects overpressured formations	8-4	59

	Date	Page
HASKELL, TOM (Haskell Exploration Services Ltd.); and WYLIE, IAN (Pacrim Energy NL)		
FOCUS: EXPLORATION. New Zealand's Canterbury basin prospects reviewed in a continental Gondwana setting	12-15	57
HATCH, KEITH (Sigmund, Kane & Hatch Inc.); MONTGOMERY, SCOTT L. (Petroleum Consultant); WILSON, GUS (Saker Geological Services); and ZIEGLER, DAN (SK Resources)		
E. Texas Upper Jurassic reefs: An expanding Cotton Valley lime play	9-22	82
HATCHER, DAVID B., and TUSSING, ARLON R. (Consultants)		
MANAGING INDEPENDENT OIL & GAS COMPANIES. Long reserves lives sustain prospects for independents in the U.S. Lower 48	11-17	49
HAUCK, GÜNTER (Thyssen Schweißtechnik GmbH); PERTENEDER, ERNST (Böhler-Schweißtechnik GmbH); WELLNITZ, GERHARD (Mannesmann Demag Energie- & Umwelttechnik); HILLENBRAND, HANS-GEROG (Europipe GmbH); and NIEDERHOFF, KURT A. (Mannesmann Forschungsinstitut)		
FOCUS: PIPELINES. Procedures, considerations for welding X-80 line pipe established	9-15	47
HAUN, RICK R., OTTO, KEN W., and WHITLEY, S. CRAIG (Purvin & Gertz Inc.)		
AFRICA REPORT. Africa gaining importance in world LPG trade	5-12	56
HEDNE, PAAL (Sintef); MALNES, DAG (Consultant); SHEA, RICHARD H. (Scandpower Inc.); and RASMUSSEN, JON (Scandpower S.A.)		
Holdup predictions for wet-gas pipelines compared	5-19	73
HEMPHILL, TERRY (Baroid Drilling Fluids Inc.)		
Hole-cleaning model evaluates fluid performance in extended-reach wells	7-14	56
HERRMANN, ROBERT P., SCOTT, ROBERT J., and COLE, JON C. (Transocean Offshore Inc.); and SHAUGHNESSY, JOHN M. (Amoco Corp.)		
New ultra-deepwater rig with dual rotaries will reduce costs	5-26	69
HEYLMUN, EDGAR B. (Consulting Geologist)		
Arizona's Holbrook salt basin holds oil, gas opportunities	5-5	127
HILL, DONALD G., and MCCONNELL, S. BRUCE (Schlumberger Dowell); JOHNSON, MICHAEL R. (Gulf States Environmental Solutions Inc.); and ALI, SYED A. (Chevron U.S.A. Production Co.)		
Process, optimized acidizing reduce production facility upsets	2-10	44
HILL, STEVE (Expro North Sea Ltd.); TREHERNE, IAN (Plus Design Ltd.); HUMPHREYS, NEIL, and MYERS, LARRY (Mobil Equatorial Guinea Inc.); and POLLIN, ARLENE G. (Mobil Exploration & Producing Services Inc.)		
Interference tests verify reservoir continuity, offshore Africa	11-3	75
HILLENBRAND, HANS-GEORG (Europipe GmbH); NIEDERHOFF, KURT A. (Mannesmann Forschungsinstitut); HAUCK, GÜNTER (Thyssen Schweißtechnik GmbH); PERTENEDER, ERNST (Böhler-Schweißtechnik GmbH); WELLNITZ, GERHARD (Mannesmann Demag Energie- & Umwelttechnik)		
FOCUS: PIPELINES. Procedures, considerations for welding X-80 line pipe established	9-15	47
HILLIER, JOHN M. (Sonat Exploration Co.); and SWEATMAN, RONALD E., and KESSLER, CALVIN W. (Halliburton Energy Services)		
REMEDIAL SQUEEZE SYSTEMS—1: Remedial squeeze systems provide means to seal off trouble zones	12-8	56
REMEDIAL SQUEEZE SYSTEMS—2: Properly conducted squeeze procedures eliminate downhole troubles	12-15	42
HIMPSL, FRANK L., and LERNER, BRUCE A. (Engelhard Corp.)		
Feed molecular properties explain cracking results	12-1	61
HINAI, ALLEY AL (Petroleum Development Oman); CRAMER, RON (Shell Services Co.); and DUNHAM, CLEON (Shell International Exploration & Production B.V.)		
FOCUS: PRODUCTION. Real-time automation optimizes production economics in Oman	11-24	65
HIRANO, OSAMU, ENDO, SIGERU, and FUIJTA, SAKAE (NKK Corp.); and NAGAE, MORIYASU (NNK America)		
New line pipe resists preferential corrosion at welds	3-17	92
HITE, DAVID M. (Consulting Geologist)		
A native corporation evaluates potential of Alaska's Kandik area	11-17	89
HOBBS, G. WARFIELD IV, and WINKLER, ROBERT O. (Ammonite Resources Co.)		
Economic models verify heavy oil profitability	12-22	91
HOLT, RON, PISKURICH, NICHOLAS C., BENSON, RONALD H., and ENGLAND, KEVIN W. (Schlumberger Cos.); WOODROOF, ROBERT A. JR. (ProTechnics International); and KRUS, HOLLY G., HALEY, KEN, and BRITT, LARRY (Amoco Exploration & Production Co.)		
HOW ARE STRATEGIC ALLIANCES WORKING? Strategic alliance, multidisciplinary teamwork enhanced field development in Cotton Valley trend	3-31	43
HOWES, JIM (Atlantic Richfield Indonesia Inc.)		
FOCUS: EXPLORATION. Petroleum systems, resources of Southeast Asia, Australasia	12-15	52
HSU KAI, and MINERBO, GERALD N. (Schlumberger Anadrill); HASHEM, MOHAMED (Shell Offshore); BEAN, CLARKE L. (Chevron USA Production); and PLUMB, RICHARD (Schlumberger Cambridge Research)		
Sonic-while-drilling tool detects overpressured formations	8-4	59
HU, YOUNGUAN, and WU, ZHIJUN (Southwestern Petroleum Institute)		
Low permeability filter cake limits damage from high-pH drilling fluids	2-17	56
HU, YUNXIANG, WANG, RENAN, and XU, CHUNMING (Petroleum University); and CHUNG, KENG H. (Syncrude Canada Ltd.)		
Supercritical fluid extraction reveals resid properties	1-20	66
HUGENTOBLER, MIKE (Landmark Graphics Corp.); and VAN SICKLE, KIRK H., and CASH, ELAINE L. (Mobil Producing Nigeria)		
Teamwork, technology boost reserves, output off Nigeria	7-14	69
HUMPHREYS, NEIL, and MYERS, LARRY (Mobil Equatorial Guinea Inc.); POLLIN, ARLENE G. (Mobil Exploration & Producing Services Inc.); HILL, STEVE (Expro North Sea Ltd.); and TREHERNE, IAN (Plus Design Ltd.)		
Interference tests verify reservoir continuity, offshore Africa	11-3	75
HWANG, THOMAS T. (Fluor Daniel Inc.); and WEHNES, WILLIAM C. (Wejak Inc.)		
California refinery meets seismic codes using new wrapping technique	3-31	70
HYDE, STEVEN T., and CRAIG, MICHAEL J. K. (Spirit Energy 76)		
FOCUS: PRODUCTION. Deepwater Gulf of Mexico more profitable than previously thought	3-10	41
I		
INCIARTE, J. (Petroleos de Venezuela, S.A.)		
Technology pushes Venezuela's heavy-oil projects ahead	12-8	52
INOMATA, MAKOTO, SATO, KYOHEI, YAMADA, YU, and SASAKI, HAJIME (JGC Corp.)		
FOCUS: REFINING. Engineering firm has designed refinery of the future	4-28	56
ISENBERG, EUGENE M. (Nabors Industries)		
DRILLING REPORT. Onshore rig surplus diminishes as demand rises	9-22	62
J		
JENKINS, JOHN H. (Pace Consultants Inc.)		
FOCUS: REFINING. State of European refining industry is less bleak than reported	4-28	49
JICHEN, LU (Offshore Engineering Co.)		
Man-made island exploits shallow water offshore China	7-14	65

	Date	Page
JOHN, CHACKO J., JONES, BOBBY L., BOURGEOIS, REED, and HARDER, BRIAN J. (Louisiana State University); and MONCRIEF, JAMES E. (Consulting Geologist)		
Tuscaloosa marine shale may be untouched Gulf Coast oil play	12-29	91
JOHNSON, ELDEN R., and COX, MICHAEL L. (Alyeska Pipeline Service Co.); and VIETH, PATRICK H. (Kiefner & Associates Inc.); and RUST, STEVEN W. (Battelle)		
Alyeska program allows pig performance comparison	2-10	52
JOHNSON, MICHAEL R. (Gulf States Environmental Solutions Inc.); ALI, SYED A. (Chevron U.S.A. Production Co.); and HILL, DONALD G., and MCCONNELL, S. BRUCE (Schlumberger Dowell)		
Process, optimized acidizing reduce production facility upsets	2-10	44
JOHNSTON, DANIEL (Daniel Johnston & Co. Inc.)		
Index useful for evaluating petroleum fiscal systems	12-1	49
JONES, BOBBY L., BOURGEOIS, REED, HARDER, BRIAN J., and JOHN, CHACKO J. (Louisiana State University); and MONCRIEF, JAMES E. (Consulting Geologist)		
Tuscaloosa marine shale may be untouched Gulf Coast oil play	12-29	91
JORDAN, DOUGLAS W. (ARCO Venezuela Inc.); SLATT, ROGER M., AL-SIYABI, HISHAM, and WILLIAMS, EUGENE T. (Colorado School of Mines); STONE, CHARLES G. (Arkansas Geological Commission); WEIMER, PAUL (University of Colorado); and DAVIS, ROBERT J. (Schlumberger Wireline & Testing)		
Arkansas turbidite studies may aid Oklahoma Jackfork exploration	8-18	67
JUINITI, RICARDO, MORAIS, MARCOS G. G., and BARUSCO F., PEDRO J. (Petrobras E&P)		
PRODUCTION REPORT. Water depth production record set off Brazil	9-29	59

K

KALKSTEIN, HAROLD, WILLIAMSON, ROBERT, and GLAUTHIER, TAD (Boston Consulting Group)		
PETROCHEMICAL REPORT. Petrochemical producers gain advantage with novel business strategies	5-19	54
KANE, RICHARD D. and ABAYARATHNA, DHARMA (CLI International Inc.); SANDERS, DAVID H. (Texaco North Sea U.K. Co.); and FARQUHAR, GALE B. (Texaco Inc.)		
OFFSHORE PETROLEUM OPERATIONS. Tests show best corrosion inhibitors for high pressure, temperature pipeline	5-5	96
KARASEK, BRETISLAV, and CIBULKA, MIROSLAV (MERO CR, A.S.)		
Czech crude-oil terminal is in operation	2-3	54
Czech crude-oil supplies diversified by new pipeline	8-25	84
KARPENSKI, MARTIN J. (Foster Wheeler Power Systems Inc.); and ALVEAL, ENRIQUE DÁVILA (Petrox SA Refinería de Petróleo)		
HOW ARE STRATEGIC ALLIANCES WORKING? Partners assume risks, lower finance costs of delayed coker-cogeneration project in Chile	3-31	55
KASAP, EKREM, ALTUNBAY, MEHMET, TANG, XIAOMING, and GEORGI, DAN (Western Atlas Logging Services)		
PRODUCTION REPORT. Permeability profiles provide new reservoir management tools	9-29	74
KASS, MANFRED, and SENGER, JENS-CHRISTIAN (BEB Erdgas & Erdöl GmbH); and SACH, MANFRED (Nowsco Well Service GmbH)		
Low-head drilling avoids differential sticking and reduces formation damage	9-8	71
KEARLEY, ALAN C. (Hibernia Management & Development Co.); and STAVNES, TOR (Fabcon Canada Inc.)		
Hibernia will emphasize electronic documentation	5-5	115
KEDGE, CHRIS, and STUCHLY, JANUSZ (SNC-Lavalin Inc.)		
Computer model designs African multiproducts line extension	7-14	47
KELLY, PAUL (Rowan Cos.)		
Advanced jack up rig breaking U.S. construction drought	3-10	56
KENNS-DUMAS, JOHN (Petrotrin Pointe-a-Pierre); and WHARTON, STANLEY R. (Amoco Trinidad Oil Co.)		
Innovations help exploit mature Trinidad land fields	6-30	77
KENNEDY, JOHN (Journal Staff)		
1996: THE YEAR IN REVIEW. High oil and gas prices, fundamental change mark global energy industry scene in 1996	1-6	30
Booming oil/gas demand, limited potential push TPAO abroad	2-24	29
100 years in B'ville	4-28	17
Sub-Saharan Africa energy future brightening	7-28	31
A very loyal reader	8-4	17
KERNAN, KEVIN, and CARRANZA, DANIEL (Transportadora de Gas del Sur S.A.)		
Argentine gas plant expansion makes most of existing infrastructure	5-26	64
KESSLER, CALVIN W., and SWEATMAN, RONALD E. (Halliburton Energy Services); and HILLIER, JOHN M. (Sonat Exploration Co.)		
REMEDIAL SQUEEZE SYSTEMS—1: Remedial squeeze systems provide means to seal off trouble zones	12-8	56
REMEDIAL SQUEEZE SYSTEMS—2: Properly conducted squeeze procedures eliminate downhole troubles	12-15	42
KHARTUKOV, EUGENE M. (International Center for Petroleum Business Studies)		
RUSSIA REPORT. Incomplete privatization mixes ownership of Russia's oil industry	8-18	36
KHENE, DJAMEL EDDINE (Sonatrach)		
Cross-border gas-pipeline projects face daunting challenges	12-15	33
KING, GRAEME G. (Greenpipe Industries Ltd.); and LAWRENCE, J. E., and BARON, JOHN J. (Shell Canada Ltd.)		
World's longest sulfur pipeline operating smoothly after 3 years	1-20	59
KNOTT, DAVID (Journal Staff)		
U.K. operators rebut safety criticism	1-6	26
Change ahead in Nigeria?	1-13	27
Automakers ready for NGV takeoff; is the oil and gas industry ready?	1-20	20
Now God also is against Shell	1-20	26
U.K. Labour Party's pollution pledge	1-27	35
New data show British Gas vulnerability	2-3	27
Margin hike ahead for Europe's refiners	2-10	30
Industry's history of big ideas	2-17	32
U.K. parties differ on waste	2-24	38
BP to share process secret	3-3	39
Tight squeeze for Texaco's Erskine	3-10	27
Synthetic fuels aiding South Africa to advance its world energy role	3-17	23
Hole appears in tanker spill cover	3-17	30
Murphy breaks from U.K. R&M merger	3-24	26
FOCUS: PIPELINES. Diverless tie-in tool gets first test on deepwater line	3-24	48
Warning for OPEC LNG producers	3-31	30
R&D fear in cost-cutting era	4-7	36
Iraq building E&D project list for post-U.N. sanctions period	4-14	19
Continuing U.S.-Iraq acrimony ensures sanctions will linger	4-14	22
Learn to listen to your reservoir	4-14	34
Russia to flood Europe with gas?	4-21	30
New niche for gas-to-liquids	4-28	42
Colombia to relax E&P license terms	5-5	60
Africa's bifocal vision	5-12	19
Communicate for gain	5-12	35
AFRICA REPORT. Interest grows in African oil and gas opportunities	5-12	41
Malaysia still beckons after 106 years	5-19	38
Get smarter by sharing ideas	5-26	32
BP joins Shell across invisible frontier	6-2	46
Cloud over Gulf as merger folds	6-9	27
ENERGY COMPANY SECURITY. BP molds security strategy to fit the country	6-9	31
U.K. a cash well for petroleum firms?	6-16	30
Gas-to-liquids projects gaining momentum as process list grows	6-23	16
EU gas directive slows investment	6-23	22
PETROLEUM PRODUCTS MARKETING. European retailers scramble for market share in former Communist bloc	6-23	35
Undercover agents at 'green' debate	6-30	38
Triton seeks second Colombian giant	7-7	28

	Date	Page
Bangladesh is buzzing	7-14	31
India quietly joins gas-to-liquids race	7-21	36
Gas-to-liquids' rite of passage	7-28	35
IT industry's new millennium fears	8-4	31
A personal letter from Nigeria	8-11	33
OGJ SPOTLIGHT: BP slates world-scale expansions at its Grangemouth complex	8-18	15
How to deal with 'greens'	8-18	27
North Sea dilemma	8-25	25
BP hits back at Greenpeace	8-25	40
OFFSHORE NORTHERN EUROPE. Northwest Europe's operators show creativity in new developments	8-25	49
OFFSHORE NORTHERN EUROPE. World's first subsea separation and injection plant destined for Troll C	8-25	66
U.K.'s radical transport plan	9-1	38
Cornering Asia's "sub-LNG" gas	9-8	37
North Sea reserves life pegged at 25 years	9-15	26
Solar campaign at oil show	9-15	27
U.K. taxation green herring	9-22	36
Spreading demand for gas treatment	9-29	42
Oil company name for sale	10-6	35
U.K., Norway revive rigs-to-reefs ideas	10-13	38
Solar power's economic hurdle	10-20	43
LNG vs. GTL: taking the battle to sea	10-27	33
Eco-bunglers target oil personnel	11-3	15
U.K.'s MMS ready to drill off Bulgaria	11-3	31
Engineers need 'rock-bashers'	11-10	41
Geological perils of deep water	11-17	30
OGJ SPOTLIGHT. Royal Dutch/Shell reinventing itself as total energy company	11-24	29
Apache hunts gas for regulated markets	11-24	40
FSU megadeal action suddenly heating up	11-24	42
How to survive the merger battle	12-1	38
Shell takes note of Brent spar views	12-8	15
Exiting Myanmar	12-15	25
Prices in place for Thai privatization	12-22	29
Thai R&M fights currency crisis	12-29	23
KON, M. Y., ANDERSON, N. L., and GILSDORF, N. L. (UOP); BAARS, F. J. (UOP Ltd.); and SHURVEROV, VLADIMIR M., and KRYLOV, VALERY A. (Lukoil-Permnefteorgsintez)		
Catalyst improves octane at Perm refinery	11-24	49
KRAPELS, EDWARD N. (Energy Security Analysis Inc.)		
Why energy futures markets merit support amid latest controversy	2-10	21
KRUS, HOLLY G., HALEY, KEN, and BRITT, LARRY (Amoco Exploration & Production Co.); BENSON, RONALD H., ENGLAND, KEVIN W., HOLT, RON, and PISKURICH, NICHOLAS C. (Schlumberger Cos.); and WOODROOF, ROBERT A. JR. (ProTechnics International)		
HOW ARE STRATEGIC ALLIANCES WORKING? Strategic alliance, multidisciplinary teamwork enhanced field development in Cotton Valley trend	3-31	43
KRYLOV, VALERY A., and SHUVEROV, VLADIMIR M. (Lukoil-Permnefteorgsintez); ANDERSON, G. C., GILSDORF, N. L., and KON, M. Y. (UOP); and BAARS, F. J. (UOP Ltd.)		
Catalyst improves octane at Perm refinery	11-24	49
KUTASOV, I. M. (MultSpectrum Technologies)		
Method estimates arctic well thermal insulation efficiency	10-6	82
L		
LACOUR, MARK J. (Citgo Petroleum Corp.); DAVEY, STEVEN W., and HALEY, JOHN T. (Grace Davison); and BECKER, JOHN S. (Ultramar Diamond Shamrock Corp.)		
SOx control additive reduces emissions, saving capital investments	12-29	76
LAGE, ANTONIO, and NAKAGAWA, EDSON (Petrobras); WANG, ZHIHUA, VEFRING, ERLEND, and ROMMETVEIT, ROLV (RF-Rogaland Research); BIESEMAN, TACO (Shell Research & Technical Services); and MAGLIONE, ROBERTO (Agip S.p.A.)		
UNDERBALANCED DRILLING—Conclusion: Underbalanced drilling model simulates dynamic well bore conditions	7-7	62
LAHUSEN, PATRICK H. (SEAG)		
Switzerland exploration may resume	6-23	78
LAWRENCE, J. E., and BARON, JOHN J. (Shell Canada Ltd.); and KING, GRAEME G. (Greenpipe Industries Ltd.)		
World's longest sulfur pipeline operating smoothly after 3 years	1-20	59
LAWSON, ROBERT G. (Journal Staff)		
Journal archives	3-3	19
LEAL, MARCOS, and PORTILLO, RICARDO (Hughes Christensen Co.); ROTHE, JORGE RODRIQUEZ (Lagoven SA); and CARRE C., LEANDRO J. (Corpoven SA)		
FOCUS: DRILLING. Ream-while-drilling tool cuts costs of three Venezuelan wells	1-13	33
LEESON, TOM (Expro North Sea Ltd.)		
OFFSHORE NORTHERN EUROPE. Extended well testing boosts prospects for development of marginal fields	8-25	72
LEPPIN, DENNIS, and MEYER, HOWARD S. (Gas Research Institute)		
Research targets lower gas-processing operating costs	12-29	83
LEPPIN, DENNIS, and MEYER, HOWARD S. (Gas Research Institute); and QUINLAN, MICHAEL P., and ECHTERHOFF, LINDA W. (M. W. Kellogg Co.)		
Cost-cutting for offshore sulfur recovery processes studied	7-21	54
LERCHE, IAN (University of South Carolina); and BAGIROV, ELCHIN (Azerbaijan Academy of Sciences)		
Hydrates represent gas source, drilling hazard	12-1	99
LERNER, BRUCE A., and HIMPSL, FRANK L. (Engelhard Corp.)		
Feed molecular properties explain cracking results	12-1	61
LESCHACK, LEONARD A. (Topaz Energy Exploration Ltd.)		
GEOCHEMICAL EXPLORATION—1: Results of magnetic GHI and radiometric surveys in W. Canada	5-19	84
GEOCHEMICAL EXPLORATION—2: Magnetic HGI, radiometric surveys prove cost-effective in W. Canada	5-26	82
LEU, WERNER, GREBER, EMIL, and SCHEGG, ROLAND (Geoform Ltd.)		
New exploration concepts spark Swiss gas, oil prospects	9-29	102
LICHTBLAU, JOHN H. (Petroleum Industry Research Foundation Inc.)		
CENTRAL ASIAN FSU. COMMENT: U.S. Caspian area foreign policy in conflict with resource plans	8-11	19
LINDSAY, RICHARD O., RATCLIFF, DAVIS, and SKIDMORE, CHUCK (Diamond Geoscience Research Corp.)		
APPLIED GEOPHYSICS REPORT. AVO helps seismic imaging in deepwater environments	11-3	55
LINSER, HENRY J. JR., DRUDY, MICHAEL J., ENDRIZZI, FRED, and URBANELLI, ANTHONY A. (Mobil Shipping & Transportation)		
WORLDWIDE GAS PROCESSING. LNG fleet increases in size and capabilities	6-2	79
LINSLEY, JERALD (Continental Controls Inc.)		
New, simpler equations calculate pressure-compensated temperatures	3-24	58
LOREY, MANFRED (Filtan Anlagenbau GmbH); STEINLE, JÜRGEN (BEB Erdöl & Erdgas GmbH); THOMAS, KEITH (Falk & Thomas Engineering GmbH); and HAJDIK, BROCK (CBS Engineering Inc.)		
Vortex tube can increase liquid hydrocarbon recovery at plant inlet	9-8	76
LUI, DAVID W. (Lui Petroleum Management Inc.); and CARROLL, JOHN J. (Gas Liquids Engineering)		
Density, phase behavior keys to acid gas injection	6-23	63
LUIGS, C. RUSSELL (Global Marine Inc.)		
DRILLING REPORT. Rising oil demand, not oil price, increases drilling activity	9-22	56
LYNCH, JOE (Ortloff Engineers Ltd.); and FERNÁNDEZ, CÉSAR L. (C&F Engineering S.A.)		
Argentine plant increases capacity, improves NGL recoveries	10-6	74

	Date	Page
LYNCH, MICHAEL C., and ADELMAN, M. A. (Massachusetts Institute of Technology)		
RESERVES GROWTH: GEOLOGY, TECHNOLOGY, AND ECONOMICS. Fixed view of resource limits creates undue pessimism	4-7	56
LYONS, PAUL C. (U.S. Geological Survey)		
Central-northern Appalachian coalbed methane flow grows	7-7	76
M		
MCCARTHY, STEVE J., RATERMAN, MIKE F., and SMALLEY, CHRIS G. (Mobil Technology Co.); SODOMIN, JOE F. (Mobil Oil Corp.); and MILLER, RIK B. (M. W. Kellogg Technology Co.)		
Refiner improves FCC yields using latest process technologies	8-18	56
MCCONNELL, S. BRUCE, and HILL, DONALD G. (Schlumberger Dowell); JOHNSON, MICHAEL R. (Gulf States Environmental Solutions Inc.); and ALI, SYED A. (Chevron U.S.A. Production Co.)		
Process, optimized acidizing reduce production facility upsets	2-10	44
MCCORMAC, MICHAEL P. (Ohio Division of Oil & Gas)		
Ohio oil and gas activity, exploration on the upswing	6-9	67
MCDONALD, G. W. G. (IONA Ltd.); WALSH, BRIAN (North Atlantic Refining Ltd.); and PERKINS, J. DOUGLAS (United Catalysts Inc.)		
REFINING REPORT. Canadian refiner finds simple route to reformulated gasoline production	3-17	70
MCLEOD, GORDON (Petrofac LLC)		
Kyrgyzstan starts up its first refinery	5-5	108
MACDONALD, JOHN J. (Chevron Petroleum Technology Co.); and SMITH, ROBERT S. (OPC Engineering Inc.)		
OFFSHORE TOPSIDES—1: Decision trees aid production facility design	2-17	42
OFFSHORE TOPSIDES—CONCLUSION: Decision trees clarify novel technology applications	2-24	69
MACK, JAMES C., and SMITH, JULIE E. (Tiorco Inc.)		
Gels correct in-depth reservoir permeability variation	1-6	33
MACKINTOSH, ALASDAIR, and SCHMIDT, VOLKER (Gemini Consulting)		
MANAGEMENT PERSPECTIVE. How petroleum firms can win battle for growth with vision engineering	2-17	21
MAGLIONE, ROBERTO (Agip S.p.A.); GAZANIOL, DIDIER (Elf Aquitaine S.A.); WANG, ZHIHUA, and ROMMETVEIT, ROLV (RF-Rogaland Research); and BIJLEVELD, AARNOUD (Shell Research & Technical Services)		
UNDERBALANCED DRILLING—1: Underbalanced drilling requires downhole pressure management	6-16	54
MAGLIONE, ROBERTO (Agip S.p.A); LAGE, ANTONIO, and NAKAGAWA (Petrobras); WANG, ZHIHUA, VEFRING, ERLEND, and ROMMETVEIT, ROLV (RF-Rogaland Research); and BIESEMAN, TACO (Shell Research & Technical Services)		
UNDERBALANCED DRILLING—Conclusion: Underbalanced drilling model simulates dynamic well bore conditions	7-7	62
MAHONEY, MICHAEL J. (Alliance Engineering Inc.); and GALLAHER, DALE M. (Shell Offshore Inc.)		
PIPELINE REPORT. Enchilada platform anchors offshore Louisiana transportation network	10-27	45
MALHOTRA, MOHAN (Consultant)		
India's oil supply deficit spurs reforms to lure foreign capital	6-2	25
MANAGEMENT PERSPECTIVE: Incentives needed to expand India's oil transportation infrastructure	10-27	27
MALNES, DAG (Consultant); SHEA, RICHARD H. (Scandpower Inc.); RASMUSSEN, JON (Scandpower A.S.); and HEDNE, PAAL (Sintef)		
Holdup predictions for wet-gas pipelines compared	5-19	73
MALOV, B. A., SAZANOV, Y. A., and YELISEEV, V. N. (Orenburgneft JSC); and YUDEN, I. S. (JKX Oil & Gas)		
Jet pump feeds corrosion inhibitor in Russian waterflood	1-27	88
MALOY, WILLIAM T. (Centerline Oil & Gas Inc.)		
A geological assessment: What's ahead for Louisiana Austin chalk	6-2	149
MANATT, JIM, and NICKOLOFF, TOM (Providence Technologies Inc.)		
APPLIED GEOPHYSICS REPORT. Small advances yield big improvements in seismic images from difficult areas	11-3	37
MANUEL, JAMES J., and TEICHROB, ROBERT R. (Tesco Corp.)		
Underbalanced foam drilling reduces hole problems and costs	8-18	52
MAPLES, ROBERT E. (Maples & Associates)		
Linear regression determines crude properties at variable boiling points	11-3	72
MARCUM, JIM (Peter Chadwick Inc.)		
MANAGING INTEGRATED OIL & GAS COMPANIES. U.S. refiners urged to capture, defend prosperity	11-10	57
MARKOUS, RICARDO, and PETTINAROLI, PABLO (Transportadora de Gas del Norte S.A.)		
Argentina's TGN changes to increase supply, ensure delivery	3-31	73
MASTERS, C. D., ROOT, D. H., and TURNER, R. M. (U.S. Geological Survey)		
World resource statistics geared for electronic access	10-13	98
MASTROGIACOMO, MICHAEL, and BILODEAU, DENIS (Petro-Canada Products); and TREIBER, STEVEN, and WALKER, JOHN (Treiber Controls Inc.)		
FOCUS: REFINING. Advanced control of hydrogen network reduces energy consumption	9-1	72
MATHUR, V. K. (U.S. Naval Surface Warfare Center); SIEGEL, FREDERIC R. (George Washington University); CHEN, REUVEN (Tel Aviv University); and VAZ, J. EDUARDO (Venezuelan Institute of Scientific Research)		
The integrated radiation environment at well sites—an adjunct to petroleum exploration	10-6	91
MATZKE, RICHARD H. (Chevron Overseas Petroleum Inc.)		
CENTRAL ASIAN FSU. Tengiz experience example of oil revitalization advancing in FSU	8-4	20
MEHRA, YUV R. (Advanced Extraction Technologies Inc.); and BELL, C. JAMES (Poco Petroleums Ltd.)		
Canadian plant ups C3 recovery without more dehydration	9-29	86
MELCONIAN, M. G. (PetroTechnologies Inc.)		
COMMENT: Trans-Caucasus transport agreement is needed to solve Caspian problem	10-13	28
MENELEY, ROBERT A. (Canadian Gas Potential Committee)		
Where future Canadian gas supply will originate	12-15	67
MENSA-WILMOT, GRAHAM (GeoDiamond)		
New PDC cutters improve drilling efficiency	10-27	64
MENSA-WILMOT, GRAHAM (GeoDiamond); GARRETT, ROBERT L. (Garrett Fluid Technology); and STOKES, REBECCA S. (Coastal Superior Solutions Inc.)		
PAO lubricant inhibits bit balling, speeds drilling	4-21	68
MEYER, HOWARD S., and LEPPIN, DENNIS (Gas Research Institute)		
Research targets lower gas-processing operating costs	12-29	83
MEYER, HOWARD S., and LEPPIN, DENNIS (Gas Research Institute);and (QUINLAN, MICHAEL P., and ECHTERHOFF, LINDA W. (M. W. Kellogg Co.)		
Cost-cutting for offshore sulfur recovery processes studied	7-21	54
MIERS, JOHN H. (Amoco Exploration & Production Co.)		
THE GULF OF MEXICO'S REVIVAL. Technology gives gulf prospects world-class investment appeal—	1-20	50
MILLER, RIK B. (M. W. Kellogg Technology Co.); MCCARTHY, STEVE J., RATERMAN, MIKE F., and SMALLEY, CHRIS G. (Mobil Technology Co.); and SODOMIN, JOE F. (Mobil Oil Corp.)		
Refiner improves FCC yields using latest process technologies	8-18	56

	Date	Page
MILIOS, PAUL B., (El Paso Field Services); and HARRIS, RICHARD A. (ABB Randall)		
Large U.S. liquids plant starts up	5-12	60
MILOSEVIC, ZORAN (KBC Process Technology Ltd.); and PONHÖFER, CLEMENS (Ruhr Öl GmbH)		
Refiner improves steam system with custom simulation/ optimization package	8-25	90
MINERBO, GERALD N., and HSU, KAI (Schlumberger Anaidril); HASHEM, MOHAMED (Shell Offshore); BEAN, CLARKE L. (Chevron USA Production); and PLUMB, RICHARD (Schlumberger Cambridge Research)		
Sonic-while-drilling tool detects overpressured formations	8-4	59
MINYARD, ROBERT J., and STRODE, MICHAEL O. (Mobil Corp.)		
WORLDWIDE GAS PROCESSING. Project financing knits parts of costly LNG supply chain	6-2	66
MIYAZAKI, SHIGE (Bureau of Resource Sciences)		
Australia's southeastern Bonaparte basin has plenty of potential	4-21	78
MLADENKA, PAUL, and SWIFT, TERRY E. (Swift Energy Co.)		
PRODUCTION REPORT. Technology tackles low-permeability sand in South Texas	9-29	68
MONCRIEF, JAMES E. (Consulting Geologist); and JOHN, CHACKO J., JONES, BOBBY L., BOURGEOIS, REED, and HARDER, BRIAN J. (Louisiana State University)		
Tuscaloosa marine shale may be untouched Gulf Coast oil play	12-29	91
MONTAGNA, JAMES M., PENBERTHY, W. L. JR., and RICHARD, BENNETT M. (Baker Oil Tools)		
HORIZONTAL COMPLETIONS—2: Stand-alone screens vary in effectiveness	8-11	63
MONTELEONE, PATRIC, UPHOFF, THOMAS, ALLEN, GEORGE, and STEARNS, MICHAEL (Mohave Oil and Gas Corp.)		
Exploratory well to start in Lusitanian basin, Portugal	12-8	67
MONTGOMERY, SCOTT L. (Petroleum Consultant)		
Raster logs may be basis for a geologic workstation	4-7	84
New well may open production in Marfa basin, Tex.	11-10	87
MONTGOMERY, SCOTT L. (Petroleum Consultant); WILSON, GUS (Saker Geological Services); ZIEGLER, DAN (SK Resources); and HATCH, KEITH (Sigmund, Kane & Hatch Inc.)		
E. Texas Upper Jurassic reefs: An expanding Cotton Valley lime play	9-22	82
MORAIS, MARCOS G. G., BARUSCO F., PEDRO J., and JUINITI, RICARDO (Petrobras E&P)		
PRODUCTION REPORT. Water depth production record set off Brazil	9-29	59
MOREL, JOHN (Foxpark Oil & Gas); and WATKINS, TOM (Lexam Explorations (U.S.A.) Inc.)		
More data point to potential in S. Colorado sub-basin	9-1	78
MORITIS, GUNTIS (Journal Staff)		
Sink a well, let it flow? Not quite	3-10	17
Shell advancing gulf deepwater developments	4-28	26
Old fields, new opportunities	8-18	11
Obstacles for new technology	11-24	25
FOCUS: PRODUCTION. Debottlenecking to increase production from Neptune spar	11-24	72
ABANDONING OFFSHORE PLATFORMS. Industry tackles offshore decommissioning	12-8	33
MORITIS, GUNTIS, TRUE, WARREN R., and GADDY, DEAN E. (Journal Staff)		
OTC technical program underscores technological advances offshore	5-19	25
MORSI, KAMAL, BAYOUMI, HESHAM, and ROBSON, DAVID (Abu Dhabi National Oil Co.)		
Pipeline rehab vs. replacement depends on condition, service	9-22	68
MÜLLER, FRANK-ULRICH, ZEPPENFELD, ROLF, and DERCZ, ANDREAS (ILF Consulting Engineers); and RAJZINGER, JÁN (Slovensky plynárensky priemysel, s.p.)		
Study identifies upgrade scenarios for Slovak gas system	4-7	71
MULVANY, GREGORY M., and NTELA, NDOMA (Chevron Overseas Petroleum Inc.); and MYERS, PHILIP (Chevron Research & Technology Co.)		
Analysis of tank failure reveals oversight in inspection procedures	2-17	47
MURPHY, DAVID, FRIEDEMANN, CHRIS, and CASTRO, RICARDO (McKinsey & Co. Inc.)		
MANAGEMENT PERSPECTIVE: Can the E&P industry avoid future shock?	9-8	23
MURRAY, JAMES E. (Consultant); and RIVAS M., MARGIORI, and BRACHO, JOSE LUIS (Lagoven S.A.)		
NGL recovery being hiked by natural-gasoline recirculation	7-7	67
MUSUMECI, JOSEPH (Stratus Engineering Inc.)		
Refiners match Rvp reduction measures to operating problems	2-3	57
MYERS, LARRY, and HUMPHREYS, NEIL (Mobil Equatorial Guinea Inc.); POLLIN, ARLENE G. (Mobil Exploration & Producing Services Inc.); HILL, STEVE (Expro North Sea Ltd.); and TREHERNE, IAN (Plus Design Ltd.)		
Interference tests verify reservoir continuity, offshore Africa	11-3	75
MYERS, PHILIP E. (Chevron Research & Technology Co.); and MULVANY, GREGORY M., and NTELA, NDOMA (Chevron Overseas Petroleum Inc.)		
Analysis of tank failure reveals oversight in inspection procedures	2-17	47
MYERS, STEPHEN D (Mobil Oil Corp.); and BELLOW, EDWARD J. JR., GHAZAL, FOUAD P., and SILVERMAN, ALAN J. (Mobil Technology Co.)		
WORLDWIDE GAS PROCESSING. Technology advances keeping LNG cost-competitive	6-2	74
N		
NAFEY, A. SAFWAT, and GAD, F. K. (Suez Canal University); ZOGHAIB, N. (Balayim Petroleum Co.); and EL-EMAM, N. (Al-Azhar University)		
New friction factor derived from study of Egyptian gas-field pipeline	11-10	72
NAGAE, MORIYASU (NKK America); and HIRANO, OSAMU, ENDO, SIGERU, and FUJITA, SAKAE NKK Corp.)		
New line pipe resists preferential corrosion at welds	3-17	92
NAKAGAWA, EDSON, and LAGE, ANTONIO (Petrobras); WANG, ZHIHUA, VEFRING, ERLEND, and ROM-METVEIT, ROLV (RF-Rogaland Research); BIESE-MAN, TACO (Shell Research & Technical Services); and MAGLIONE, ROBERTO (Agip S.p.A.)		
UNDERBALANCED DRILLING—Conclusion: Underbalanced drilling model simulates dynamic well bore conditions	7-7	62
NAKLIE, MARIE M. (Mobil Technology Co.)		
Design advanced for large-scale, economic, floating LNG plant	6-30	66
NELSON, DANIEL, BORRELLI, EUGENE N., AVIDAN, AMOS A., and GARDNER, ROBERT E. (Mobil LNG Inc.); and RETHORE, TARA J. (Arthur D. Little Inc.)		
WORLDWIDE GAS PROCESSING. LNG links remote supplies and markets	6-2	54
NGUYEN, H. T., PENBERTHY, W. L. JR., and BICKHAM, KENNETH L. (Baker Oil Tools)		
HORIZONTAL COMPLETIONS—CONCLUSION: Gravel packing prevents productivity decline	9-1	56
NGUYEN, PHILIP D., and WEAVER, JIMMIE D. (Halliburton Energy Services Inc.)		
Chemical hooks keep proppant in place	9-8	84
NGUYEN, PHILIP D., and WEAVER, JIMMIE D. Halliburton Energy Services Inc.); and ALI, SYED A. (Chevron U.S.A. Production Co.)		
Polymer particulates control fluid loss during well completions	5-12	65
NICKOLOFF, TOM, and MANATT, JIM (Providence Technologies Inc.)		
APPLIED GEOPHYSICS REPORT. Small advances yield big improvements in seismic images from difficult areas	11-3	37

	Date	Page
NIEDERHOFF, KURT A. (Mannesmann Forschungsinstitut); HAUCK, GÜNTER (Thyssen Schweißtechnik GmbH); PERTENEDER, ERNST (Böhler-Schweißtechnik GmbH); WELLNITZ, GERHARD (Mannesmann Demag Energie- & Umwelttechnik); and HILLENBRAND, HANS-GEORG (Europipe GmbH)		
FOCUS: PIPELINES. Procedures, considerations for welding X-80 line pipe established	9-15	47
NIMS, D. G. (BP Exploration Alaska); BROWN, L. A. (HARVEY) JR. (Hughes Christensen Co.); and STOLTZ, D. S. (ARCO Alaska Inc.)		
Drill bit benchmarking improves drilling performance	6-2	139
NTELA, NDOMA, and MULVANY, GREGORY M. (Chevron Overseas Petroleum Inc.); and MYERS, PHILIP E. (Chevron Research & Technology Co.)		
Analysis of tank failure reveals oversight in inspection procedures	2-17	47
O		
OTTO, KEN W., WHITLEY, S. CRAIG, and HAUN, RICK R. (Purvin & Gertz Inc.)		
AFRICA REPORT. Africa gaining importance in world LPG trade	5-12	56
OVERSTREET, CHARLES C. (CUDD Pressure Control Inc.); and ADAMS, LARRY S. (Chevron USA Production Co.)		
Coiled tubing facilitates deep underbalaced workover	3-31	64
P		
PACK, DAVID J. (Gas Measurement Consultant); and CHESNOY, ANDRE-BERNARD (Hydrocarbons Production Consultant)		
S_8 threatens natural gas operations, environment	4-28	74
PAFFENBARGER, JOHN (International Energy Agency)		
GAS AND POWER FROM REFINING. Despite increasing refinery power production, oil-fired generation is declining	7-14	35
PAIK, KEUN-WOOK (Royal Institute of International Affairs); and CHOI, JAE-YONG (University College)		
RUSSIA REPORT. Pipeline gas trade between Asian Russia, Northeast Asia gets fresh look	8-18	41
PEDERSEN, CLIFFORD C., and VERMEER, PETER J. (Sunoco Inc.); and CANNEY, WILLIAM M., and AYALA, JOHN S. (Aspen Technology Inc.)		
Blend-control system all but eliminates reblends for Canada refiner	7-28	74
PENBERTHY, W. L. JR., and SMEJKAL, KEVIN D. (Baker Oil Tools)		
FOCUS: PRODUCTION. HORIZONTAL COMPLETIONS—1: Proper drilling, displacing critical for open hole completions	7-21	71
PENBERTHY, W. L. JR., BICKHAM, KENNETH L., and NGUYEN, H. T. (Baker Oil Tools)		
HORIZONTAL COMPLETIONS—CONCLUSION: Gravel packing prevents productivity decline	9-1	56
PENBERTHY, W. L. JR., RICHARD, BENNETT M., and MONTAGNA, JAMES M. (Baker Oil Tools)		
HORIZONTAL COMPLETIONS—2: Stand-alone screens vary in effectiveness	8-11	63
PERKINS, J. DOUGLAS (United Catalysts Inc.); MCDONALD, G. W. G. (IONA Ltd.); and WALSH, BRIAN (North Atlantic Refining Ltd.)		
REFINING REPORT. Canadian refiner finds simple route to reformulated gasoline production	3-17	70
PERRIN, DARYL, WRUBLESKI, ROBERT, and FERG, GORDON (Shell Canada Inc.); CHADBOURNE, DAYLE (Amoco Canada Petroleum Co.); and PICARD, DAVID (Clearstone Engineering Ltd.)		
PIPELINE REPORT. Canadian crude terminal resolves tank-odor problems	10-27	50
PERTENEDER, ERNST (Böhler-Schweißtechnik GmbH); WELLNITZ, GERHARD (Mannesmann Demag Energie- & Umwelttechnik); HILLENBRAND, HANS-GEORG (Europipe GmbH); NIEDERHOFF, KURT A. (Mannesmann Forschungsinstitut); and HAUCK, GÜNTER (Thyssen Schweißtechnik GmbH)		
FOCUS: PIPELINES. Procedures, considerations for welding X-80 line pipe established	9-15	47
PETERS, KEN E., and WAGNER, JOHN B. (Mobil Technology Co.); CARPENTER, DANIEL G. (Mobil Business Development, Americas); and CONRAD, KEITH T. (Mobil Exploration Norway)		
BOLIVIA EXPLORATION—1: World class Devonian potential seen in eastern Madre de Dios basin	2-17	61
BOLIVIA EXPLORATION—2: Eastern Madre de Dios Devonian generated large volumes of oil	2-24	61
PETTINAROLI, PABLO; and MARKOUS, RICARDO (Transportadora de Gas del Norte S.A.)		
Argentina's TGN changes to increase supply, ensure delivery	3-31	73
PETZET, G. ALAN (Journal Staff)		
Focus on exploration	2-3	15
Powder River coalbed methane output growing fast	3-10	79
Monument jeopardizes area of Utah's resources	3-24	69
Nonproducing Paraguay to get rare wildcats	4-21	76
Focus on negotiations	5-26	15
Egypt eastern desert exploration turns up oil	6-30	83
S. Korea's Yukong sets U.S. E&D joint venture	7-28	89
Vicksburg, Frio successes lift Galveston Bay area prospects	8-11	75
Michigan to get horizontal and directional well projects	8-11	80
Mannville gas reentry lights western Canada	8-18	72
Galveston Bay gas prospects heating up	9-22	33
Coastal lists Smackover, Sunniland objectives in gulf off Florida	9-29	101
Remote prospects reveal North American optimism	10-20	27
Arizona's Holbrook CO_2 area may hold oil, gas reserves	10-20	84
Union Texas hopes to reproduce its Pakistan Badin experience	11-3	86
New Cretaceous pay zones opened in southern Mississippi's Brookhaven field	11-17	93
Interactive 3D visualization speeds well, reservoir planning	11-24	82
PETZET, G. ALAN, and BECK, ROBERT J. (Journal Staff)		
FORECAST AND REVIEW: Revenue surge to sustain drilling in U.S. and Canada	1-27	66
MIDYEAR FORECAST. U.S. drilling may soften; Canada, world levels strong	7-28	64
PHILCOX, JACK, and FENNER, GARY W. (Praxair Inc.)		
GAS AND POWER FROM REFINING. A Texas project illustrates the benefits of integrated gasification	7-14	41
PICARD, DAVID (Clearstone Engineering Ltd.); WRUBLESKI, ROBERT, FERG, GORDON, and PERRIN, DARYL (Shell Canada Inc.); and CHADBOURNE, DAYLE (Amoco Canada Petroleum Co.)		
PIPELINE REPORT. Canadian crude terminal resolves tank-odor problems	10-27	50
PICCIOTTI, MARCELLO (Technipetrol SpA)		
ETHYLENE TECHNOLOGIES—1: Novel ethylene technologies developing, but steam cracking remains king	6-23	53
ETHYLENE TECHNOLOGIES—Conclusion: New ethylene routes are available, but economics inhibit their use	6-30	71
PISKURICH, NICHOLAS C., BENSON, RONALD H., ENGLAND, KEVIN W., and HOLT, RON (Schlumberger Cos.); WOODROOF, ROBERT A. JR. (ProTechnics International); and KRUS, HOLLY G., HALEY, KEN, and BRITT, LARRY (Amoco Exploration & Production Co.)		
HOW ARE STRATEGIC ALLIANCES WORKING? Strategic alliance, multidisciplinary teamwork enhanced field development in Cotton Valley trend	3-31	43
PITTARD, ASHLEY (University of New South Wales)		
Field abandonment costs vary widely worldwide	3-17	84
ABANDONING OFFSHORE PLATFORMS. Governments grapple with abandonment fiscal terms	12-8	42
PLATER, JAY, and WADE, WILLIAM W. (Foster Associates Inc.)		
Mobile Bay gas enjoying banner year despite production problems	11-10	29
PLUMB, RICHARD (Schlumberger Cambridge Research); HSU, KAI, and MINERBO, GERALD N. (Schlumberger Anadrill); HASHEM, MOHAMED (Shell Offshore); and BEAN, CLARKE L. (Chevron USA Production)		
Sonic-while-drilling tool detects overpressured formations	8-4	59
PLOTNIKOV, VALERI S. (Sibur Co.); and RUDIN, MIKHAIL G. (Raytheon Engineers & Constructors)		
RUSSIA REPORT. Russia struggles toward refinery modernization goals	8-18	31

	Date	Page
POLLIN, ARLENE G. (Mobil Exploration & Producing Services Inc.); HILL, STEVE (Expro North Sea Ltd.); TREHERNE, IAN (Plus Design Ltd.); and HUMPHREYS, NEIL, and MYERS, LARRY (Mobil Equatorial Guinea Inc.)		
Interference tests verify reservoir continuity, offshore Africa	11-3	75
PONHÖFER, CLEMNS (Ruhr Öl GmbH); and MILOSEVIC, ZORAN (KBC Process Technology Ltd.)		
Refiner improves steam system with custom simulation/ optimization package	8-25	90
PORTILLO, RICARDO, and LEAL, MARCOS (Hughes Christensen Co.); ROTHE, JORGE RODRIQUEZ (Lagoven SA); and CARRE C. LEANDRO J. (Corpoven SA)		
FOCUS: DRILLING. Ream-while-drilling tool cuts costs of three Venezuelan wells	1-13	33
PRINCE, PAUL K. (Azerbaijan International Operating Co.); and YENZER, DENNIS E. (Santa Fe International Corp.)		
OFFSHORE PETROLEUM OPERATIONS. Caspian Sea MODU refurbished to western standards	5-5	65
PYRON, ARTHUR J. (Pyron Consulting)		
Paleogeomorphic mapping applied in Stagecoach gas field, N.Y.	12-22	106
Q		
QUADRI, S.M. G. J., and QUADRI, VIQAR UN NISA (Consultants)		
Indus basin off Pakistan contains few wells	6-16	68
QUADRI, VIQAR UN NISA, and QUADRI, S. M. G. J. (Consultants)		
Indus basin off Pakistan contains few wells	6-16	68
QUINLAN, MICHAEL P., and ECHTERHOFF, LINDA W. (M. W. Kellogg Co.); and LEPPIN, DENNIS , and MEYER, HOWARD S. (Gas Research Institute)		
Cost-cutting for offshore sulfur recovery processes studied	7-21	54
R		
RADLER, MARILYN (Journal Staff)		
Survey RSVP	4-14	15
WORLDWIDE CONSTRUCTION. Refineries	4-14	56
WORLDWIDE CONSTRUCTION. Petrochemicals	4-14	67
WORLDWIDE CONSTRUCTION. Sulfur	4-14	82
WORLDWIDE CONSTRUCTION. Gas Processing	4-14	84
WORLDWIDE CONSTRUCTION. Pipeline	4-14	89
WORLDWIDE GAS PROCESSING. Survey	6-2	88
WORLDWIDE GAS PROCESSING. World sulfur production	6-2	135
WORLDWIDE CONSTRUCTION. Refineries	10-13	57
WORLDWIDE CONSTRUCTION. Petrochemicals	10-13	67
WORLDWIDE CONSTRUCTION Sulfur	10-13	79
WORLDWIDE CONSTRUCTION Gas Processing	10-13	84
WORLDWIDE CONSTRUCTION Pipelines	10-13	88
WORLDWIDE REFINING. Survey	12-22	41
RADLER, MARILYN, and BECK, ROBERT J. (Journal Staff)		
OGJ200. State-owned companies of OGJ100 control big share of world's oil	9-8	62
RAJZINGER, JÁN (Slovensky plynárensky priemysel, s.p.); and DERCZ, ANDREAS, MÜLLER, FRANK-ULRICH, and ZEPPENFELD, ROLF (ILF Consulting Engineers)		
Study identifies upgrade scenarios for Slovak gas system	4-7	71
RAPPOLD, KEITH (Journal Staff)		
Focus issues	1-13	17
RASMUSSEN, JON (Scandpower A.S.); HEDNE, PAAL (Sintef); MALNES, DAG (Consultant); and SHEA, RICHARD H. (Scandpower Inc.)		
Holdup predictions for wet-gas pipelines compared	5-19	73
RATCLIFF, DAVIS, SKIDMORE, CHUCK, and LINDSAY, RICHARD O. (Diamond Geoscience Research Corp.)		
APPLIED GEOPHYSICS REPORT. AVO helps seismic imaging in deepwater environments	11-3	55
RATERMAN, MIKE F., SMALLEY, CHRIS G., and MCCARTHY, STEVE J. (Mobil Technology Co.); SODOMIN, JOE F. (Mobil Oil Co.); and MILLER, RIK B. (M. W. Kellogg Technology Co.)		
Refiner improves FCC yields using latest process technologies	8-18	56
REAMER, DAVID (Halliburton Energy Services)		
MANAGEMENT PERSPECTIVE: How to identify the key elements of successful industry alliances	4-7	25
REIDER, SUSAN, and WASSERSTROM, ROBERT (Terra Group Inc.)		
MANAGEMENT PERSPECTIVE: Oil firms in environmentally sensitive areas learning to balance stakeholder interests	8-18	23
MANAGEMENT PERSPECTIVE: Lessons for Conoco's experiences in Ecuador's rain forest	8-18	24
RETHORE, TARA J. (Arthur D. Little Inc.); and AVIDAN, AMOS A., GARDNER, ROBERT E., NELSON, DANIEL, and BORRELLI, EUGENE N. (Mobil LNG Inc.)		
WORLDWIDE GAS PROCESSING. LNG links remote supplies and markets	6-2	54
RHODES, ANNE K. (Journal Staff)		
Hostile operating climate augurs further closures for U.S. refiners	3-10	21
Refinery cuisine	3-17	19
REFINING REPORT. Environmentally advanced refinery nears start-up in Germany	3-17	49
REFINING REPORT. Dutch refinery nears completion of major renovation	3-17	60
GUIDE TO WORLD CRUDES: Australia's Cossack crude oil is light and sweet	5-5	113
GUIDE TO WORLD CRUDES: Welsh crude is very light and sweet	5-12	71
PETROCHEMICAL REPORT. World ethylene capacity jumped 5 million mt/y or 6.5% in past year	5-19	45
GUIDE TO WORLD CRUDES: Assays of two Venezuelan crudes differ significantly	6-9	58
FOCUS: REFINING. New lubes plants use state-of-art hydrodewaxing technology	9-1	63
Out of the frying pan	9-1	19
WORLDWIDE CATALYST REPORT. Number of catalyst formulations stable in a tough market	10-6	41
IPAA focuses on emerging technologies, IT innovations	11-24	38
RICHARD, BENNETT M., MONTAGNA, JAMES M., and PENBERTHY, W. L. JR. (Baker Oil Tools)		
HORIZONTAL COMPLETIONS—2: Stand-alone screens vary in effectiveness	8-11	63
RIVAS M., MARGIORI, and BRACHO, JOSÉ LUIS (Lagoven S.A.); and MURRAY, JAMES E. (Consultant)		
NGL recovery being hiked by natural-gasoline recirculation	7-7	67
ROBERTS, REBECCA B. (Texaco Inc.)		
Surge in gulf gas will impact Louisiana facilities	8-18	45
ROBINSON, G. H., and SMITH, N. J. (Smith Rea Energy)		
RESERVES GROWTH: GEOLOGY, TECHNOLOGY, AND ECONOMICS. Technology pushes reserves 'crunch' date back in time	4-7	43
ROBSON, DAVID, MORSI, KAMAL, and BAYOUMI, HESHAM (Abu Dhabi National Oil Co.)		
Pipeline rehab vs. replacement depends on condition, service	9-22	68
ROCHE, JOSEPH R. (Hydril Co.); and FOUGERE, PETE (Transocean Offshore Inc.)		
FOCUS: DRILLING. Multiplex BOP system decreases riser disconnect time	12-1	86
ROMMETVEIT, ROLV, and WANG, ZHIHUA (RF-Rogaland Research); BIJLEVELD, AARNOUD (Shell Research & Technical Services); MAGLIONE, ROBERTO (Agip S.p.A.); and GAZANIOL, DIDIER (Elf Aquitaine S.A.)		
UNDERBALANCED DRILLING—1: Underbalanced drilling requires downhole pressure management	6-16	54
ROMMETVEIT, ROLV, WANG, ZHIHUA, and VEFRING, ERLEND (RF-Rogaland Research); BIESEMAN, TACO (Shell Research & Technical Services); MAGLIONE, ROBERTO (Agip S.p.A.); and LAGE, ANTONIO, and NAKAGAWA, EDSON (Petrobras)		
UNDERBALANCED DRILLING—Conclusion: Underbalanced drilling model simulates dynamic well bore conditions	7-7	62

	Date	Page
ROOT, D. H., TURNER, R. M., and MASTERS, C. D. (U.S. Geological Survey)		
World resource statistics geared for electronic access	10-13	98
ROSENFELD, MICHAEL J. (Kiefner & Associates Inc.)		
Procedure improves line pipe Charpy test interpretation	4-14	40
ROTHE, JORGE RODRIQUEZ (Lagoven SA); CARRE C., LEANDRO J. (Corpoven SA); and PORTILLO, RICARDO, and LEAL, MARCOS (Hughes Christensen Co.)		
FOCUS: DRILLING. Ream-while-drilling tool cuts costs of three Venezuelan wells	1-13	33
ROUX, JACQUES (Soekor (Pty.) Ltd.)		
Potential outlined in Southern Outeniqua basin off S. Africa	7-21	87
ROYAN, TOM (Tartan Engineering Corp. Ltd.); and WICHERT, EDWARD (Gascan Resources Ltd.)		
Acid gas injection eliminates sulfur recovery expense	4-28	67
RUDIN, MIKHAIL G. (Raytheon Engineers & Constructors); and PLOTNIKOV, VALERI S. (Sibur Co.)		
RUSSIA REPORT. Russia struggles toward refinery modernization goals	8-18	31
RUST, STEVEN W. (Battelle); JOHNSON, ELDEN R., and COX, MICHAEL L. (Alyeska Pipeline Service Co.); and VIETH, PATRICK H. (Kiefner & Associates Inc.)		
Alyeska program allows pig performance comparison	2-10	52
S		
SACH, MANFRED (Nowsco Well Service GmbH); and KASS, MANFRED, and SENGER, JENS-CHRISTIAN (BEB Erdgas & Erdöl GmbH)		
Low-head drilling avoids differential sticking and reduces formation damage	9-8	71
SALIKHOV, RAVIL GABDULLINOVICH (JSC Lukoil-Burenie); and DUBROVIN, EVGENY FEDYOROVICH, and SLEDKOV, VLADIMIR VLADIMIROVICH (Lukoil Oil Co.)		
Cluster and dual-lateral drilling technologies optimize Russian well production	11-24	53
SANDERS, DAVID H. (Texaco North Sea U.K. Co.); FARQUHAR, GALE B. (Texaco Inc.); and KANE, RICHARD D., and ABAYARATHNA, DHARMA (CLI International Inc.)		
OFFSHORE PETROLEUM OPERATIONS. Tests show best corrosion inhibitors for high pressure, temperature pipeline	5-5	96
SASAKI, HAJIME, INOMATA, MAKOTO, SATO, KYOHEI, and YAMADA, YU (JGC Corp.)		
FOCUS: REFINING. Engineering firm has designed refinery of the future	4-28	56
SATO, KYOHEI, YAMADA, YU, SASAKI, HAJIME, and INOMATA, MAKOTO (JGC Corp.)		
FOCUS: REFINING. Engineering firm has designed refinery of the future	4-28	56
SAUNDERS, BARBARA (Journal Staff)		
We have ways	1-6	15
U.S. refiners must piece together RFG, pollution control puzzle	1-6	18
U.S. gas/electric megamergers may slow as new policies tested	2-3	19
PG&E to buy Valero's natural gas unit	2-10	24
Major overcapacity woes loom for oxygenates despite rising demand	3-31	21
MTBE faces a new round of political skirmishes in the U.S.	3-31	22
North American gas firms chase partnerships to boost marketing	4-21	19
The wizard is out	6-9	11
PETROLEUM PRODUCTS MARKETING: California marketers face new onslaught of RFG criticism	6-23	47
Gulf of Mexico subsalt exploration frontier still on learning curve	7-14	19
SAUNDERS, BARBARA, and WHEATLEY, RICHARD (Journal Staff)		
1997 OTC highlights 50 years of offshore technological progress	5-12	22
SAVINI, C. F. (Saipem (Malaysian) Sdn Bhd)		
Malaysia's Peninsular Gas system gets another segment	12-1	54
SAZANOV, Y. A., YELISEEV, V. N., and MALOV, B. A. (Orenburgneft JSC); and YUDEN, I. S. (JKX Oil & Gas)		
Jet pump feeds corrosion inhibitor in Russian waterflood	1-27	88
SCHAMP, JUERGEN (Mobil International Drilling Services)		
FOCUS: DRILLING. North German operator uses learning curve to improve horizontal drilling techniques	12-1	69
SCHEGG, ROLAND, LEU, WERNER, and GREBER, EMIL (Geoform Ltd.)		
New exploration concepts spark Swiss gas, oil prospects	9-29	102
SCHMIDT, VOLKER, and MACKINTOSH, ALASDAIR (Gemini Consulting)		
MANAGEMENT PERSPECTIVE. How petroleum firms can win battle for growth with vision engineering	2-17	21
SCHMOKER, JAMES W., and ATTANASI, EMIL D. (U.S. Geological Survey)		
Reserve growth important to U.S. gas supply	1-27	95
SCHNAITH, MARK W., and UPSON, LAWRENCE L. (UOP)		
Low-sulfur specifications cause refiners to look at hydrotreating options	12-8	47
SCHREURS, JAN (Brunei Shell Petroleum Co. Sdn. Bhd.)		
Geology of Brunei deltas, exploration status updated	8-4	76
SCOTT, ROBERT J., COLE, JON C., and HERRMANN, ROBERT P. (Transocean Offshore Inc.); and SHAUGHNESSY, JOHN M. (Amoco Corp.)		
New ultra-deepwater rig with dual rotaries will reduce costs	5-26	69
SECK, ANDREW, and VAN MEURS, A. PEDRO (Van Meurs & Associates Ltd.)		
FOCUS: EXPLORATION. Government takes decline as nations diversify terms to attract investment	5-26	35
Fiscal terms for gas need improvement in many countries	8-11	78
SELIG, BERND J. (Hartford Steam Boiler Inspection & Insurance Co.); WILLKE, THEODORE L. (Gas Research Institute); and SHIRES, THERESA M., and COWGILL, R. MICHAEL (Radian International LLC)		
FOCUS: PIPELINES. U.S. risk management can reduce regulation, enhance safety	6-16	37
SEN, FAN, XIUSHAN, LIU, and ZAIHONG, SHI (Daqing Petroleum Institute)		
Natural parameter method accurately calculates well bore trajectory	1-27	90
SENGER, JENS-CHRISTIAN, and KASS, MANFRED (BEB Erdgas & Erdöl GmbH); and SACH, MANFRED (Nowsco Well Service GmbH)		
Low-head drilling avoids differential sticking and reduces formation damage	9-8	71
SHARMA, MUKUL M., and WANG, EDOUARD (University of Texas)		
Unconsolidated sand grain shape, size impact frac-pack design	5-19	67
SHAUGHNESSY, JOHN M. (Amoco Corp.); and COLE, JON C., HERRMANN, ROBERT P., and SCOTT, ROBERT J. (Transocean Offshore Inc.)		
New ultra-deepwater rig with dual rotaries will reduce costs	5-26	69
SHEA, RICHARD H., (Scandpower Inc.); RASMUSSEN, JON (Scandpower A.S.); HEDNE, PAAL (Sintef); and MALNES, DAG (Consultant)		
Holdup predictions for wet-gas pipelines compared	5-19	73
SHELBY, DAVID C., WAGNER, D. C., and ALI, SYED A. (Chevron U.S.A. Production Co.); and FOXENBERG, WILLIAM E. (OSCA)		
New test identifies completion fluid compatibility problems	8-25	95
SHIRES, THERESA M., and COWGILL, R. MICHAEL (Radian International LLC); SELIG, BERND J. (Hartford Steam Boiler Inspection & Insurance Co.); and WILLKE, THEODORE L. (Gas Research Institute)		
FOCUS: PIPELINES. U.S. risk management can reduce regulation, enhance safety	6-16	37

	Date	Page
SHUCHART, CHRIS, and YEAGER, VALERIE (Halliburton Energy Services)		
In situ gels improve formation acidizing	1-20	70
SHUVEROV, VLADIMIR M, and KRYLOV, VALERY A. (Lukoil-Permnefteorgsintez); ANDERSON, G. C., GILSDORF, N. L., and KON, M. Y. (UOP); and BAARS, F. J. (UOP Ltd.)		
Catalyst improves octane at Perm refinery	11-24	49
SIEGELL, JEFFREY H., and ANDERSON, MICHAEL E. (Exxon Research & Engineering Co.)		
New calculation method alters tank emission reports	11-17	77
SILVERMAN, ALAN J., BELLOW, EDWARD J. JR., and GHAZAL, FOUAD P. (Mobil Technology Co.); and MYERS, STEPHEN D. (Mobil Oil Corp.)		
WORLDWIDE GAS PROCESSING. Technology advances keeping LNG cost-competitive	6-2	74
SINGLETON, ALAN H. (Energy International)		
Advances make gas-to-liquids process competitive for remote locations	8-4	68
SKIDMORE, CHUCK, LINDSAY, RICHARD O., and RATCLIFF, DAVIS (Diamond Geoscience Research Corp.)		
APPLIED GEOPHYSICS REPORT. AVO helps seismic imaging in deepwater environments	11-3	55
SLATT, ROGER M., AL-SIYABI, HISHAM, and WILLIAMS, EUGENE T. (Colorado School of Mines); STONE, CHARLES G. (Arkansas Geological Commission); WEIMER, PAUL (University of Colorado); DAVIS, ROBERT J. (Schlumberger Wireline & Testing); and JORDAN, DOUGLAS W. (ARCO Venezuela Inc.)		
Arkansas turbidite studies may aid Oklahoma Jackfork exploration	8-18	67
SLEDKOV, VLADIMIR VLADIMIROVICH, and DUBROVIN, EVGENY FEDYOROVICH (Lukoil Oil Co.); and SALIKHOV, RAVIL GABDULLINOVICH (JSC Lukoil-Burenie)		
Cluster and dual-lateral drilling technologies optimize Russian well production	11-24	53
SMALLEY, CHRIS G., MCCARTHY, STEVE J., and RATERMAN, MIKE F. (Mobil Technology Co.); SODOMIN, JOE F. (Mobil Oil Co.); and MILLER, RIK B. (M. W. Kellogg Technology Co.)		
Refiner improves FCC yields using latest process technologies	8-18	56
SMEJKAL, KEVIN D., and PENBERTHY, W. L. JR. (Baker Oil Tools)		
FOCUS: PRODUCTION. HORIZONTAL COMPLETIONS—1: Proper drilling, displacing critical for open hole completions	7-21	71
SMITH, GORDON R., VACAS, FRANCISCO J., and BARKER, GARY (Amoco Corp.); and SWINGHOLM, EVAN K., YUILL, RICHARD M., and ALEMAN, MIGUEL A. (Entrix Inc.)		
SOUTH AMERICA REPORT. Managing nontechnical risks associated with seismic operations in the tropical rain forests of Ecuador	4-21	50
SMITH, JENNIFER (Journal Staff)		
Weevil's learning curve	11-17	21
SMITH, JULIE E., and MACK, JAMES C. (Tiorco Inc.)		
Gels correct in-depth reservoir permeability variation	1-6	33
SMITH, N. J., and ROBINSON, G. H. (Smith Rea Energy)		
RESERVES GROWTH: GEOLOGY, TECHNOLOGY, AND ECONOMICS. Technology pushes reserves 'crunch' date back in time	4-7	43
SMITH, ROBERT S. (OPC Engineering Inc.); and MACDONALD, JOHN J. (Chevron Petroleum Technology Co.)		
OFFSHORE TOPSIDES—1: Decision trees aid production facility design	2-17	42
OFFSHORE TOPSIDES—CONCLUSION: Decision trees clarify novel technology applications—John J. MacDonald and Robert S. Smith	2-24	69
SODOMIN, JOE F. (Mobil Oil Corp.); MILLER, RIK B. (M. W. Kellogg Technology Co.); and MCCARTHY, STEVE J., RATERMAN, MIKE F., and SMALLEY, CHRIS G. (Mobil Technology Co.)		
Refiner improves FCC yields using latest process technologies	8-18	56
STAVNES, TOR (Fabcon Canada Inc.); and KEARLEY, ALAN C. (Hibernia Management & Development Co.)		
Hibernia will emphasize electronic documentation	5-5	115
STEARNS, MICHAEL, MONTELEONE, PATRIC, UPHOFF, THOMAS, and ALLEN, GEORGE (Mohave Oil and Gas Corp.)		
Exploratory well to start in Lusitanian basin, Portugal	12-8	67
STEFUREAK, PETER (Norward Energy Services Corp.); and WHITEHOUSE, GEOFF (Western Rock Bit Co. Ltd.)		
PRACTICAL DRILLING TECHNOLOGY. Closed surface system allows accurate monitoring of drilling returns	3-3	65
STEINLE, JÜRGEN (BEB Erdöl & Erdgas GmbH); THOMAS, KEITH (Falk & Thomas Engineering GmbH); HAJDIK, BROCK (CBS Engineering Inc.); and LOREY, MANFRED (Filtan Anlagenbau GmbH)		
Vortex tube can increase liquid hydrocarbon recovery at plant inlet	9-8	76
STOKES, REBECCA S. (Coastal Superior Solutions Inc.); MENSA-WILMOT, GRAHAM (GeoDiamond); and GARRETT, ROBERT L. (Garrett Fluid Technology)		
PAO lubricant inhibits bit balling, speeds drilling	4-21	68
STOLTZ, D. S. (ARCO Alaska Inc.); NIMS, D. G. (BP Exploration Alaska); and BROWN, L. A. (HARVEY) JR. (Hughes Christensen Co.)		
Drill bit benchmarking improves drilling performance	6-2	139
STONE, CHARLES G. (Arkansas Geological Commission); WEIMER, PAUL (University of Colorado); DAVIS, ROBERT J. (Schlumberger Wireline & Testing); JORDAN, DOUGLAS W. (ARCO Venezuela Inc.); and SLATT, ROGER M., AL-SIYABI, HISHAM, and WILLIAMS, EUGENE T. (Colorado School of Mines)		
Arkansas turbidite studies may aid Oklahoma Jackfork exploration	8-18	67
STRODE, MICHAEL O., and MINYARD, ROBERT J. (Mobil Corp.)		
WORLDWIDE GAS PROCESSING. Project financing knits parts of costly LNG supply chain	6-2	66
STUCHLY, JANUSZ, and KEDGE, CHRIS (SNC-Lavalin Inc.)		
Computer model designs African multiproducts line extension	7-14	47
SUN, HAIWANG (Maurer Engineering Inc.)		
Method reduces errors in oil-based mud hydraulic calculations	3-24	53
SWAIN, EDWARD J. (Consultant)		
U.S. LNG imports 1996-1997 should recover from low 1995 levels	1-27	84
Sulfur recovery in U.S. refineries is at an all-time high	4-21	71
U.S. petroleum coke production expected to increase	11-10	79
SWEATMAN, RONALD E., and KESSLER, CALVIN W. (Halliburton Energy Services); and HILLIER, JOHN M. (Sonat Exploration Co.)		
REMEDIAL SQUEEZE SYSTEMS—1: Remedial squeeze systems provide means to seal off trouble zones	12-8	56
REMEDIAL SQUEEZE SYSTEMS—2: Properly conducted squeeze procedures eliminate downhole troubles	12-15	42
SWIFT, TERRY E., and MLADENKA, PAUL (Swift Energy Co.)		
PRODUCTION REPORT. Technology tackles low-permeability sand in South Texas	9-29	68
SWINGHOLM, EVAN K., YUILL, RICHARD M., and ALEMAN, MIGUEL A. (Entrix Inc.); and BARKER, GARY, SMITH, GORDON R., and VACAS, FRANCISCO J. (Amoco Corp.)		
SOUTH AMERICA REPORT. Managing nontechnical risks associated with seismic operations in the tropical rain forests of Ecuador	4-21	50

	Date	Page
T		
TAKACS, GABOR, and TURZO, ZOLTAN (University of Miskolc)		
Improved gas lift proposed for Hungarian field	7-7	57
TAKIN, MANOUCHEHR (Centre for Global Energy Studies)		
COMMENT: U.S. sanctions against oil giants at odds with its Caspian policy	10-13	27
TALKINGTON, KELLY (Phillips China Inc.)		
South China Sea reservoir prompts extended reach record	11-10	67
TANG, XIAOMING, GEORGI, DAN, KASAP, EKREM, and ALTUNBAY, MEHMET (Western Atlas Logging Services)		
PRODUCTION REPORT. Permeability profiles provide new reservoir management tools	9-29	74
TAYLOR, WILLIAM M. (Cameron); and TISON, MARC, and BAHOUMINA, ANDRE (Elf Congo)		
OFFSHORE PETROLEUM OPERATIONS. Cold-forged connector ties back well risers in Congo field	5-5	90
TEGGART, BRIAN G., DUNNE, CHARLES L., and WILKINSON, RICHARD D. (British Gas Exploration & Production Ltd.)		
Batch drilling in the North Sea expedites extended-reach drilling	6-9	52
TEICHROB, ROBERT R., and MANUEL, JAMES J. (Tesco Corp.)		
Underbalanced foam drilling reduces hole problems and costs	8-18	52
TERRY, JIM (Halliburton Energy Services)		
Operators must become bigger stakeholders in technology	7-21	49
THOMAS, KEITH (Falk & Thomas Engineering GmbH); HAJDIK, BROCK (CBS Engineering Inc.); LOREY, MANFRED (Filtan Anlagenbau GmbH); and STEINLE, JÜRGEN (BEB Erdöl & Erdgas GmbH)		
Vortex tube can increase liquid hydrocarbon recovery at plant inlet	9-8	76
TING, V. C. (Chevron Petroleum Technology Co.)		
Gas-sampling accuracy unaffected by in-line separator	1-13	54
TIPPEE, BOB (Journal Staff)		
Exporting gas and making peace	2-24	25
Vehicle fleet growth to sustain oil demand	3-31	28
Spouting off online	8-11	15
THE CHANGING ENERGY MIX. Gas receives new priority in Abu Dhabi's onshore work	8-11	51
The overworked dollar bill	9-8	19
TISON, MARC, and BAHOUNINA, ANDRE (Elf Congo); and TAYLOR, WILLIAM M. (Cameron)		
OFFSHORE PETROLEUM OPERATIONS. Cold-forged connector ties back well risers in Congo field	5-5	90
TREHERNE, IAN (Plus Design Ltd.); HUMPHREYS, NEIL, and MYERS, LARRY (Mobil Equatorial Guinea Inc.); POLLIN, ARLENE G. (Mobil Exploration & Producing Services Inc.); and HILL, STEVE (Expro North Sea Ltd.)		
Interference tests verify reservoir continuity, offshore Africa	11-3	75
TREIBER, STEVEN, and WALKER, JOHN (Treiber Controls Inc.); and COLLINS, KEVIN (Mobil Oil Canada)		
Multivariable control benefits Alberta plant	5-5	118
TREIBER, STEVEN, and WALKER, JOHN (Treiber Controls Inc.); and MASTROGIACOMO, MICHAEL, and BILODEAU, DENIS (Petro-Canada Products)		
FOCUS: REFINING. Advanced control of hydrogen network reduces energy consumption	9-1	72
TRUE, WARREN R. (Journal Staff)		
Gas Facts at 50	2-10	15
WORLD PIPELINE CONSTRUCTION. World pipeline construction looks to remain robust to century's turn	2-10	34
GasAndes will flow by midyear	4-21	61
WORLDWIDE GAS PROCESSING. U.S., Canada continue dominance of world's gas processing	6-2	50
A question of change	6-16	19
PIPELINE ECONOMICS. Construction plans jump; operations skid in 1996	8-4	37
A useful perspective	9-15	17
Critical contacts	10-27	23
TRUE, WARREN R., GADDY, DEAN E., and MORITIS, GUNTIS (Journal Staff)		
OTC technical program underscores technological advances offshore	5-19	25
TURNER, R. M., MASTERS, C. D., and ROOT, D. H. (U.S. Geological Survery)		
World resource statistics geared for electronic access	10-13	98
TURZO, ZOLTAN, and TAKACS, GABOR (University of Miskolc)		
Improved gas lift proposed for Hungarian field	7-7	57
TUSSING, ARLON R., and HATCHER, DAVID B. (Consultants)		
MANAGING INDEPENDENT OIL & GAS COMPANIES. Long reserves lives sustain prospects for independents in the U.S. Lower 48	11-17	49
TWACHTMAN, RON (Twachtman Snyder & Byrd Inc.)		
ABANDONING OFFSHORE PLATFORMS. Offshore-platform decommissioning perceptions change	12-8	38
U		
UPHOFF, THOMAS, ALLEN, GEORGE, STEARNS, MICHAEL, and MONTELEONE, PATRIC (Mohave Oil and Gas Corp.)		
Exploratory well to start in Lusitanian basin, Portugal	12-8	67
UPSON, LAWRENCE L., and SCHNAITH, MARK W. (UOP)		
Low-sulfur specifications cause refiners to look at hydrotreating options	12-8	47
URBANELLI, ANTHONY A., LINSER, HENRY J. JR., DRUDY, MICHAEL J., and ENDRIZZI, FRED (Mobil Shipping & Transportation)		
WORLDWIDE GAS PROCESSING. LNG fleet increases in size and capabilities	6-2	79
V		
VACAS, FRANCISCO J., BARKER, GARY, and SMITH, GORDON R. (Amoco Corp.); and SWINGHOLM, EVAN K., YUILL, RICHARD M., and ALEMAN, MIGUEL A. (Entrix Inc.)		
SOUTH AMERICA REPORT. Managing nontechnical risks associated with seismic operations in the tropical rain forests of Ecuador	4-21	50
VAN MEURS, A. PEDRO, and SECK, ANDREW (Van Meurs & Associates Ltd.)		
FOCUS: EXPLORATION. Government takes decline as nations diversify terms to attract investment	5-26	35
Fiscal terms for gas need improvement in many countries	8-11	78
VAN SICKLE, KIRK, and CASH, ELAINE L. (Mobil Producing Nigeria); and HUGENTOBLER, MIKE (Landmark Graphics Corp.)		
Teamwork, technology boost reserves, output off Nigeria	7-14	69
VAZ, J. EDUARDO (Venezuelan Institute of Scientific Research); MATHUR, V. K. (U.S. Naval Surface Warfare Center); SIEGEL, FREDERIC R. (George Washington University); and CHEN, REUVEN (Tel Aviv University)		
The integrated radiation environment at well sites—an adjunct to petroleum exploration	10-6	91
VEFRING, ERLEND, ROMMETVEIT, ROLV, and WANG, ZHIHUA (RF-Rogaland Research); BIESEMAN, TACO (Shell Research & Technical Services); MAGLIONE, ROBERTO (Agip S.p.A.); and LAGE, ANTONIO, and NAKAGAWA, EDSON (Petrobras)		
UNDERBALANCED DRILLING—Conclusion: Underbalanced drilling model simulates dynamic well bore conditions	7-7	62
VEIL, JOHN A. (Argonne National Laboratory)		
Npdes permits have increased emphasis on control of toxic pollutants	1-6	46

	Date	Page
Offsite oil field waste disposal varies across U.S.	11-17	79
VELLA, PHILIP A. (Carus Chemical Co.)		
Improved cleaning method removes pyrophoric iron sulfide safely	2-24	65
VERMEER, PETER J., and PEDERSEN, CLIFFORD C. (Sunoco Inc.); and CANNEY, WILLIAM M., and AYALA, JOHN S. (Aspen Technology Inc.)		
Blend-control system all but eliminates reblends for Canada refiner	7-28	74
VIETH, PATRICK H. (Kiefner & Associates Inc.); RUST, STEVEN W. (Battelle); and JOHNSON, ELDEN R., and COX, MICHAEL L. (Alyeska Pipeline Service Co.)		
Alyeska program allows pig performance comparison	2-10	52
W		
WADE, WILLIAM W., and PLATER, JAY (Foster Associates Inc.)		
Mobile Bay gas enjoying banner year despite production problems	11-10	29
WAGNER, JOHN B., and PETERS, KEN E. (Mobil Technology Co.); CARPENTER, DANIEL G. (Mobil New Business Development, Americas); and CONRAD, KEITH T. (Mobil Exploration Norway)		
BOLIVIA EXPLORATION—1: World class Devonian potential seen in eastern Madre de Dios basin	2-17	61
BOLIVIA EXPLORATION—2: Eastern Madre de Dios Devonian generated large volumes of oil.	2-24	61
WAGNER, D. C., ALI, SYED A., and SHELBY, DAVID C. (Chevron U.S.A. Production Co.); and FOXENBERG, WILLIAM E. (OSCA)		
New test identifies completion fluid compatibility problems	8-25	95
WALKER, JOHN, and TREIBER, STEVEN (Treiber Controls Inc.); and COLLINS, KEVIN (Mobil Oil Canada)		
Multivariable control benefits Alberta plant	5-5	118
WALKER, JOHN, and TREIBER, STEVEN (Treiber Controls Inc.); and MASTROGIACOMO, MICHAEL, and BILODEAU, DENIS (Petro-Canada Products)		
FOCUS: REFINING. Advanced control of hydrogen network reduces energy consumption	9-1	72
WALSH, BRIAN (North Atlantic Refining Ltd.); PERKINS, J. DOUGLAS (United Catalysts Inc.); and MCDONALD, G. W. G. (IONA Ltd.)		
REFINING REPORT. Canadian refiner finds simple route to reformulated gasoline production	3-17	70
WANG, EDOUARD, and SHARMA, MUKUL M. (University of Texas)		
Unconsolidated sand grain shape, size impact frac-pack design	5-19	67
WANG, HAIJIANG HENRY (Energy Security Analysis Inc.)		
China's deregulation, expansion not enough to restore market balance	9-29	33
WANG, RENAN, XU, CHUNMING, and HU, YUNXIANG (Petroleum University); and CHUNG, KENG H. (Syncrude Canada Ltd.)		
Supercritical fluid extraction reveals resid properties	1-20	66
WANG, ZHIHUA, and ROMMETVEIT, ROLV (RF-Rogaland Research); BIJLEVELD, AARNOUD (Shell Research & Technical Services); MAGLIONE, ROBERTO (Agip S.p.A.); and GAZANIOL, DIDIER (Elf Aquitaine S.A.)		
UNDERBALANCED DRILLING—1: Underbalanced drilling requires downhole pressure management	6-16	54
WANG, ZHIHUA, VEFRING, ERLEND, and ROMMETVEIT, ROLV (RF-Rogaland Research); BIESEMAN, TACO (Shell Research & Technical Services); MAGLIONE, ROBERTO (Agip S.p.A.); and LAGE, ANTONIO, and NAKAGAWA, EDSON (Petrobras)		
UNDERBALANCED DRILLING—Conclusion: Underbalanced drilling model simulates dynamic well bore conditions	7-7	62
WASSERSTROM, ROBERT, and REIDER, SUSAN (Terra Group Inc.)		
MANAGEMENT PERSPECTIVE: Oil firms in environmentally sensitive areas learning to balance stakeholder interests	8-18	23
MANAGEMENT PERSPECTIVE: Lessons for Conoco's experiences in Ecuador's rain forest	8-18	24
WASTENEYS, RICHARD A. (Andersen Consulting)		
MANAGING INTEGRATED OIL & GAS COMPANIES. A PRIMER ON EXPLORING ABROAD—PART I: Strategic choices crucial to foreign upstream ventures	11-10	49
MANAGING INDEPENDENT OIL & GAS COMPANIES. A PRIMER ON EXPLORING ABROAD—PART II: Preparation eases practical problems of first work abroad	11-17	60
WATKINS, TOM (Lexam Explorations (U.S.A.) Inc.); and MOREL, JOHN (Foxpark Oil & Gas)		
More data point to potential in S. Colorado sub-basin	9-1	78
WEAVER, JIMMIE D., and NGUYEN, PHILIP D. (Halliburton Energy Services Inc.)		
Chemical hooks keep proppant in place	9-8	84
WEAVER, JIMMIE D., and NGUYEN, PHILIP D. (Halliburton Energy Services Inc.); and ALI, SYED A. (Chevron U.S.A. Production Co.)		
Polymer particulates control fluid loss during well completions	5-12	65
WEHNES, WILLIAM C. (Wejak Inc.); and HWANG, THOMAS T. (Fluor Daniel Inc.)		
California refinery meets seismic codes using new wrapping technique	3-31	70
WEIMER, PAUL (University of Colorado); DAVIS, ROBERT J. (Schlumberger Wireline & Testing); JORDAN, DOUGLAS W. (ARCO Venezuela Inc.), and SLATT, ROGER M., AL-SIYABI, HISHAM, and WILLIAMS, EUGENE T. (Colorado School of Mines)		
Arkansas turbidite studies may aid Oklahoma Jackfork exploration	8-18	67
WELLER, C. N. JR. (Consultant)		
ENERGY COMPANY SECURITY. An expatriate's guide to personal residence security	6-9	34
WELLNITZ, GERHARD (Mannesmann Demag Energie- & Umwelttechnik); HILLENBRAND, HANS-GEORG (Europipe GmbH); NIEDERHOFF, KURT A. (Mannesmann Forschungsinstitut); HAUCK, GÜNTER (Thyssen Schweißtechnik GmbH); and PERTENEDER, ERNST (Böhler-Schweißtechnik GmbH)		
FOCUS: PIPELINES. Procedures, considerations for welding X-80 line pipe established	9-15	47
WESTERMARK, R. V. (OGCI Management); and BRAY, R. P. (Amoco Production Co.)		
Amoco opens drilling test facility to industry	4-7	66
WHALEY, RAY S. (Pipeline Consultant); and WHEELER, MICHAEL L. (PanEnergy Corp.)		
FOCUS: PIPELINES. New demands for pipeline shaping scada systems.	3-24	41
WHARTON, STANLEY R. (Amoco Trinidad Oil Co.); and KEENS-DUMAS, JOHN (Petrotrin)		
Innovations help exploit mature Trinidad land fields	6-30	77
WHEATLEY, RICHARD (Journal Staff)		
'Defining' the gulf	1-20	17
THE GULF OF MEXICO'S REVIVAL. Deepwater, subsalt prospects open new era for Gulf of Mexico action	1-20	37
CAPITAL SPENDING OUTLOOK. More E&P focus of U.S. companies' budgets.	2-17	36
NGC/Destec merger latest in BTU convergence	2-24	42
East Texas Cotton Valley pinnacle reef E&D emerging as hot gas play	3-3	23
3D seismic propels Cotton Valley reef play	3-10	32
Crunch looms for U.S. service/supply sector	4-7	28
Pipeline code, unitization top Texas issues	5-5	46
Horizontal drilling, 3D seismic driving Williston resurgence.	5-26	18
Bang for the buck	6-2	21
OGJ SPOTLIGHT. CNG: Aiming to be an 'energy' company, not a gas company	6-30	42
CENTRAL ASIAN FSU. Azerbaijan's Aliyev pursuing fine political balance in advancing Caspian affairs globally	8-11	22

	Date	Page
WHEATLEY, RICHARD, and SAUNDERS, BARBARA (Journal Staff)		
1997 OTC highlights 50 years of offshore technological progress	5-12	22
WHEELER, MICHAEL L. (PanEnergy Corp.); and HALEY, RAY S. (Pipeline Consultant)		
FOCUS: PIPELINES. New demands for pipeline shaping scada systems	3-24	41
WHITEHOUSE, GEOFF (Western Rock Bit Co. Ltd.); and STEFUREAK, PETER (Norward Energy Services Corp.)		
PRACTICAL DRILLING TECHNOLOGY. Closed surface system allows accurate monitoring of drilling returns	3-3	65
WHITLEY, S. CRAIG, OTTO, KEN W., and HAUN, RICK R. (Purvin & Gertz Inc.)		
AFRICA REPORT. Africa gaining importance in world LPG trade	5-12	56
WICHERT, EDWARD (Gascan Resources Ltd.); and ROYAN, TOM (Tartan Engineering Corp. Ltd.)		
Acid gas injection eliminates sulfur recovery expense	4-28	67
WIGGINS, MATT, and YARITZ, JOE (Halliburton Services Inc.); and WISKOFSKE, MIKE (Marathon Oil Co.)		
Low-polymer borate frac fluid cleans up thoroughly	9-15	42
WILCOX, MICHAEL (Wood Mackenzie)		
MANAGEMENT PERSPECTIVE: Indian refiner/marketers must adapt to changes with deregulation	10-20	31
WILHELM, R., GUZMAN, C. E., and DAVENPORT, H. A. (Shell Offshore Inc.)		
APPLIED GEOPHYSICS REPORT. Calibration method helps in seismic velocity interpretation	11-3	44
WILKINSON, RICHARD D., TEGGART, BRIAN G., and DUNNE, CHARLES L. (British Gas Exploration & Production Ltd.)		
Batch drilling in the North Sea expedites extended-reach drilling	6-9	52
WILLIAMS, BOB (Journal Staff)		
Industry's No. 1 strategic alliance	3-31	17
Native ways	4-21	15
SOUTH AMERICA REPORT. Foreign petroleum companies developing new paradigm for operating in the rain forest region	4-21	37
SOUTH AMERICA REPORT. Oxy's strategy on environment, community issues key to success of project in Ecuador's rain forest	4-21	44
Behind the curtain	7-7	15
OGJ's energy info menu	10-13	23
WILLIAMS, EUGENE T., SLATT, ROGER M., and AL-SIYABI, HISHAM (Colorado School of Mines); STONE, CHARLES G. (Arkansas Geological Commission); WEIMER, PAUL (University of Colorado); DAVIS, ROBERT J. (Schlumberger Wireline & Testing); and JORDAN, DOUGLAS W. (ARCO Venezuela Inc.)		
Arkansas turbidite studies may aid Oklahoma Jackfork exploration	8-11	67
WILLIAMS, J. PATRICK (Arinc); and DONOVAN, MICHAEL D. (Scientech-NUS)		
Reliability-based approach reduces flare design relief load	12-15	47
WILLIAMS, MICHAEL D. (International Energy Agency)		
NATURAL GAS IN THE MIDDLE EAST. Gas projects surge in the Middle Eas as governments seek new revenue sources	2-24	54
WILLIAMSON, PAUL E. (Bureau of Resource Sciences)		
Potential seen in areas off Northwest, Southeast Australia	11-24	84
WILLIAMSON, ROBERT, GLAUTHIER, TAD, and KALKSTEIN, HAROLD (Boston Consulting Group)		
PETROCHEMICAL REPORT. Petrochemical producers gain advantage with novel business strategies	5-19	54
WILLKE, THEODORE L. (Gas Research Institute); SHIRES, THERESA M., and COWGILL, R. MICHAEL (Radian International LLC); and SELIG, BERND J. (Hartford Steam Boiler Inspection & Insurance Co.)		
FOCUS: PIPELINES. U.S. risk management can reduce regulation, enhance safety	6-16	37
WILSON, GUS (Saker Geological Services); ZIEGLER, DAN (SK Resources); HATCH, KEITH (Sigmund, Kane & Hatch Inc.); and MONTGOMERY, SCOTT L. (Petroleum Consultant)		
E. Texas Upper Jurassic reefs: An expanding Cotton Valley lime play	9-22	82
WINKLER, ROBERT O., and HOBBS, G. WARFIELD IV (Ammonite Resources Co.)		
Economic models verify heavy oil profitability	12-22	91
WISKOFSKE, MIKE (Marathon Oil Co.); and WIGGINS, MATT, and YARITZ, JOE (Halliburton Energy Services Inc.)		
Low-polymer borate frac fluid cleans up thoroughly	9-15	42
WIZHONG, CAI, and YONGQUAN, HU (Southwest Petroleum Institute)		
Equations determine reasonable rod pump submergence depth	3-24	65
WOLFE, DONALD H. (ProFlex Pipe Corp.); and BARON, JOHN J. (Shell Canada Ltd.)		
Flexible pipe combats corrosion threat at sour brine injection site	6-9	48
WOODROOF, ROBERT A. JR., (ProTechnics International); KRUS, HOLLY G., HALEY, KEN, and BRITT, LARRY (Amoco Exploration & Production Co.); and BENSON, RONALD H., ENGLAND, KEVIN W., HOLT, RON, and PISKURICH, NICHOLAS C. (Schlumberger Cos.)		
HOW ARE STRATEGIC ALLIANCES WORKING? Strategic alliance, multidisciplinary teamwork enhanced field development in Cotton Valley trend	3-31	43
WRUBLESKI, ROBERT, FERG, GORDON, and PERRIN, DARYL (Shell Canada Inc.); CHADBOURNE, DAYLE (Amoco Canada Petroleum Co.); and PICARD, DAVID (Clearstone Engineering Ltd.)		
PIPELINE REPORT. Canadian crude terminal resolves tank-odor problems	10-27	50
WU, JIANG (Maurer Engineering Inc.)		
Model predicts drill pipe fatigue in horizontal wells	2-3	47
WU, ZHIJUN, and HU, YOUNGUAN (Southwest Petroleum Institute)		
Low permeability filter cake limits damage from high-pH drilling fluids	2-17	56
WYLIE, IAN (Pacrim Energy NL); and HASKELL, TOM (Haskell Exploration Services Ltd.)		
FOCUS: EXPLORATION. New Zealand's Canterbury basin prospects reviewed in a continental Gondwana setting	12-15	57
X		
XIUSHAN, LIU, ZAIHONG, SHI, and SEN, FAN (Daqing Petroleum Institute)		
Natural parameter method accurately calculates well bore trajectory	1-27	90
XU, CHUNMING, HU, YUNIXIANG, and WANG, RENAN (Petroleum University); and CHUNG, KENG H. (Syncrude Canada Ltd.)		
Supercritical fluid extraction reveals resid properties	1-20	66
Y		
YAMADA, YU, SASAKI, HAJIME, INOMATA, MAKOTO, and SATO, KYOHEI (JGC Corp.)		
FOCUS: REFINING. Engineering firm has designed refinery of the future	4-28	56
YARITZ, JOE, and WIGGINS, MATT (Halliburton Services Co.); and WISKOFSKE, MIKE (Marathon Oil Co.)		
Low-polymer borate frac fluid cleans up thoroughly	9-15	42
YEAGER, VALERIE, and SHUCHART, CHRIS (Halliburton Energy Services)		
In situ gels improve formation acidizing	1-20	70
YELISEEV, V. N., MALOV, B. A., and SAZANOV, Y. A. (Orenburgneft JSC); and YUDEN, I. S. (JKX Oil & Gas)		
Jet pump feeds corrosion inhibitor in Russian waterflood	1-27	88

	Date	Page
YENZER, DENNIS E. (Azerbaijan International Operating Co.); and PRINCE, PAUL K. (Santa Fe International Corp.)		
OFFSHORE PETROLEUM OPERATIONS. Caspian Sea MODU refurbished to western standards	5-5	65
YONGQUAN, HU, and WIZHONG, CAI (Southwest Petroleum Institute)		
Equations determine reasonable rod pump submergence depth	3-24	65
YUDEN, I. S. (JKX Oil & Gas); and SAZANOV, Y. A., YELISEEV, V. N., and MALOV, B. A. (Orenburgneft JSC)		
Jet pump feeds corrosion inhibitor in Russian waterflood	1-27	88
YUILL, RICHARD M., ALEMAN, MIGUEL A., and SWINGHOLM, EVAN K. (Entrix Inc.); and BARKER, GARY, SMITH, GORDON R., and VACAS, FRANCISCO J. (Amoco Corp.)		
SOUTH AMERICA REPORT. Managing nontechnical risks associated with seismic operations in the tropical rain forests of Ecuador	4-21	50
Z		
ZAIHONG, SHI, SEN, FAN, and XIUSHAN, LIU (Daqing Petroleum Institute)		
Natural parameter method accurately calculates well bore trajectory	1-27	90
ZAMORA, MARIO (M-I Drilling Fluids LLC)		
PRACTICAL DRILLING TECHNOLOGY. Virtual rheology and hydraulics improve use of oil and synthetic-based muds	3-3	43
ZEPPENFELD, ROLF, DERCZ, ANDREAS, and MÜLLER, FRANK-ULRICH (ILF Consulting Engineers); and RAJZINGER, JÁN (Slovensky plynárensky priemysel, s.p.)		
Study identifies upgrade scenarios for Slovak gas system	4-7	71
ZIEGLER, DAN (SK Resources); HATCH, KEITH (Sigmund, Kane & Hatch Inc.); MONTGOMERY, SCOTT L. (Petroleum Consultant); and WILSON, GUS (Saker Geological Services)		
E. Texas Upper Jurassic reefs: An expanding Cotton Valley lime play	9-22	82
ZOGHAIB, N. (Balayim Petroleum Co.); EL-EMAM, N. (Al-Azhar University); and GAD, F. K., and NAFEY, A. SAFWAT (Suez Canal University)		
New friction factor derived from study of Egyptian gas-field pipeline	11-10	72
ZURAWSKI, RONALD P. (Tennessess Division of Geology)		
Overton County led recent Tennessee oil action	6-9	71

REFINING

OGJ ONLINE

When you're cracking a tough question, you need the right catalyst.

You're only a few clicks away from the resources of PennWell Publishing Company, the world's leading provider of high-value information to the global energy industry.

See why OGJ Online is the first place to look when you need information to help you do your job better.

Phone: 800 OGJ INFO (645 4636) • Fax: 918 832 9290

http://www.ogjonline.com

DRILLING

OGJ ONLINE

Drill the best information prospect in the petroleum industry.

You're only a few clicks away from the resources of PennWell Publishing Company, the world's leading provider of high-value information to the global energy industry.

See why OGJ Online is the first place to look when you need information to help you do your job better.

Phone: 800 OGJ INFO (645 4636) • Fax: 918 832 9290

http://www.ogjonline.com